El Dorado County Technical Assessment of Economic and Demographic Conditions

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Key Concepts

Economic & Demographic Profile

- El Dorado County is part of the 2.4-million person Sacramento Region and provides a unique mix of urban and rural characteristics with the western portion integrated into the Region's large Highway 50 Corridor economic node, the central portion spotted with farms and wineries, and the eastern portion containing the south shore of world-renowned Lake Tahoe.

- In the past 10 years, El Dorado County added nearly 16,000 residents to reach a total population of just around 182,000. Over this period, the County grew slower than the larger, Sacramento Region, about the same as the state, and outpaced the nation. By 2023 the County is expected to gain approximately 20,000 more residents, leading to a total population of close to 200,000. In the next ten years, El Dorado County is projected to experience population growth slower than the Region and the state.

- The more than 4,100 private and public sector establishments in the County support approximately 50,000 wage and salary jobs, which is only 2,000 jobs more than 10 years ago. Forecasts show that by 2023, El Dorado County will house about 51,000 jobs, only approximately 1,400 more jobs than the current level. The County's historical 10-year employment growth was stronger than the Region, state, and nation; however, the forecast shows slower growth that is less robust than the state.

- Over 68 percent (or 34,000) of all payroll jobs in El Dorado County in 2013 were supported by establishments in six major sectors including Government; Health & Social Services; Accommodation & Food Services; Retail Trade; Construction; and Professional, Scientific & Technical Service.

- The County is nearly two times more concentrated in the Arts, Entertainment, & Recreation sector than the Sacramento Region, an activity where the broader Region is somewhat underspecialized. Other major sectors where the County shows relatively high levels of specialization include Construction; Educational Services; Accommodation & Food Services; Finance & Insurance; and Professional, Scientific, & Technical Services.

- El Dorado County has some of the highest housing prices in the Sacramento Region. In September 2014, the County's median home price was $364,650, below Placer County's median home sales price of $384,850, but higher than other counties in the Region which ranged from $215,000 to $344,230.

Economic Development Opportunities

- Around 23 percent of all employment in the County is supported by base activities, a considerably lower share than the state. The two major sectors with the largest amount of base employment include Professional, Scientific, & Technical Services and Arts, Entertainment & Recreation, which together contain approximately 37 percent of all base component employment in the County.

- While El Dorado County does not necessarily possess fully-integrated industry clusters, there are certainly core activities within the County economy that already play a role in or can be networked into larger clusters that have a regional presence or are more broadly geographically dispersed. Five clusters present economic development potential in El Dorado County based principally on economic performance within the core activities grouped into the clusters and the presence of characteristics that generate unique benefits in the County—Environmental & Architectural/Engineering Services; Agriculture & Food; Medical; Business & Financial Services; and Arts, Entertainment, Recreation & Visitor Services.

Workforce Analysis

- El Dorado County's population that has attained an Associate Degree or above (almost 44 percent) is much higher than all three benchmarks.

- About 48 percent of El Dorado County's working residents are employed in occupations classified within five main occupational categories including Office & Administrative Support; Sales & Related; Management; Business & Financial Operations; and Healthcare Practitioner & Technical.

- A large portion of the County's population is not being utilized internally and commute to locations outside the County for work, reflected in the County's longer commute times (nearly 29 minutes) relative to the Sacramento Region and California.

- The top 10 occupations demanded within each potential viable cluster make up a notable share of its workforce demand, accounting for between about 30 percent and 62 percent of all jobs across the core competencies that are embedded within the clusters.

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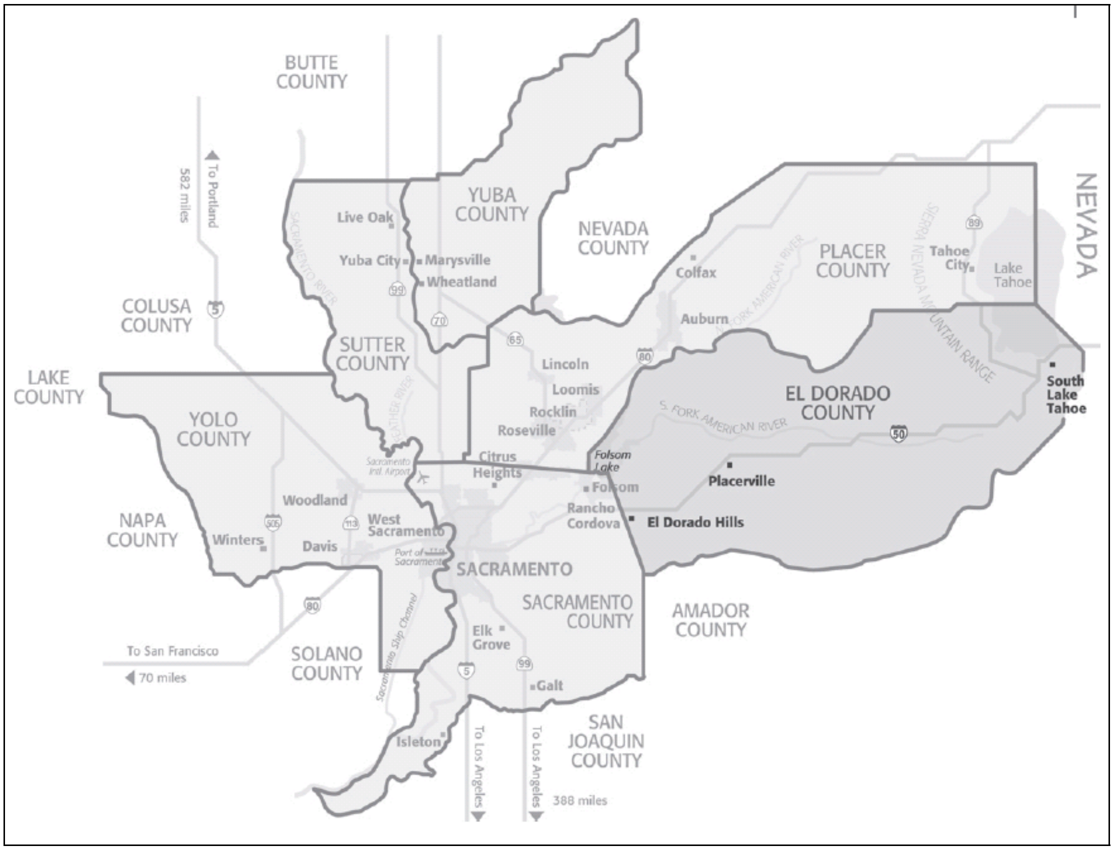
Introduction

Economic development strategic planning efforts are more effective if based on in-depth knowledge of local and regional demographic and economic characteristics, trends, and expectations. This information can be used to gather insight into the community's competitive assets or areas that require further attention and can also provide a basis for developing effective job and business attraction programs. In order to guide these planning efforts, the El Dorado County Office of Economic Development engaged the Center for Strategic Economic Research (CSER) to complete a technical assessment of economic and demographic conditions built upon previous work conducted for El Dorado County. This report is broken down into four main sections. The first section is the Economic & Demographic Profile which provides context on demographic, economic, and real estate trends in El Dorado County and benchmarks it against the Sacramento Region, California, and the United States, where applicable. The second section evaluates economic development opportunities in El Dorado County based on an analysis of base and local-serving industries, an assessment of potential cluster viability, and establishment characteristics. An overview of workforce dynamics including resident workforce and commute characteristics and potential viable cluster occupational demand are covered in the third section. The final section describes the research methodology used throughout the report.

El Dorado County is part of the six-county Sacramento Region (shown in Figure 1 on the following page), one of the fastest-growing and most dynamic regions in California. The 2.4 million-person Region, which also includes Placer, Sacramento, Sutter, Yolo, and Yuba Counties, contains a number of valuable assets such as California's capital city, an Air Force base, two major interstate freeways, several universities and community colleges, various recreational amenities, and a mix of urban and rural characteristics. El Dorado County sits on Highway 50 and provides a mix of unique characteristics with the western portion integrated into the Region's large Highway 50 Corridor economic node (along with Rancho Cordova and Folsom in Sacramento County), the central portion spotted with farms and wineries, and the eastern portion containing the south shore of world-renowned Lake Tahoe. It should be noted that, although the report refers to general aspects of South Lake Tahoe, it does not cover an in-depth analysis of its unique economic issues and opportunities.

FIGURE 1
SACRAMENTO REGION MAP



Source: Sacramento Area Commerce and Trade Organization

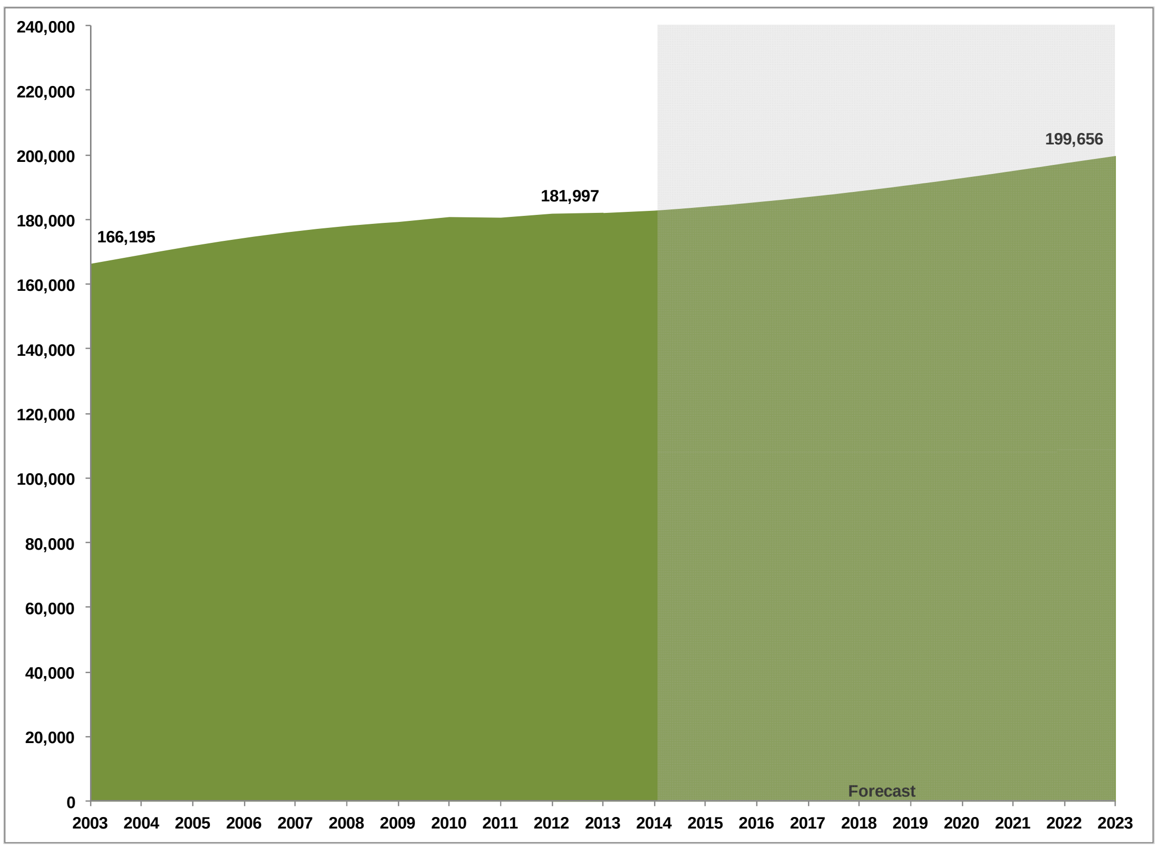
Economic & Demographic Profile

This section provides an overview of demographic, economic, and real estate trends in El Dorado County and, where applicable, the Sacramento Region, California, and the United States.

Demographic Trends

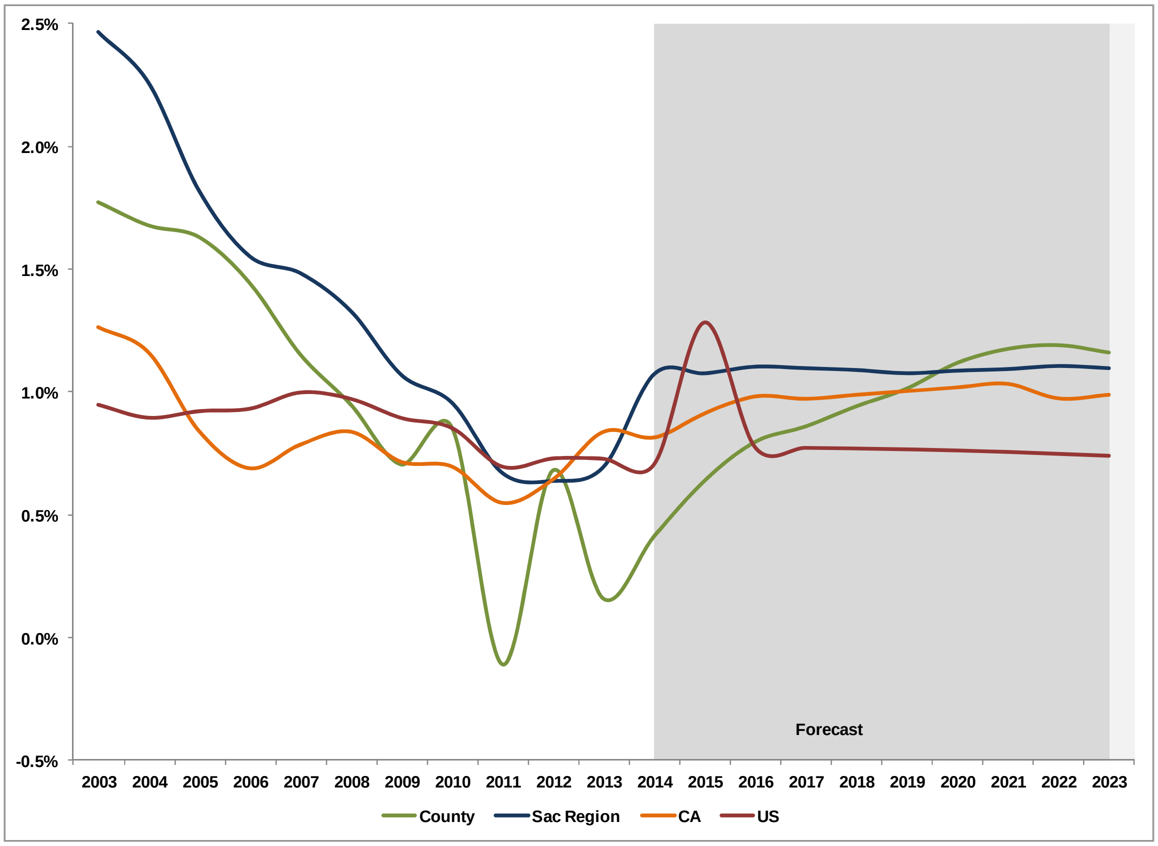
El Dorado County's population trends are illustrated in Figures, 2, 3, and 4. In the past 10 years, the County added nearly 16,000 residents to reach a total population around 182,000. Over this 10-year period, El Dorado County grew 9.5 percent, slower than the larger Sacramento Region's growth rate of over 13 percent, but greater than the state and nation's rates of about 8 and 9 percent, respectively. In the next ten years, El Dorado County's population is projected to be almost 200,000 people—growth of nearly 10 percent which lags projected regional and statewide growth, but is above growth forecasted for the nation.

FIGURE 2
EL DORADO COUNTY POPULATION



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on CA Department of Finance, County/State Population & Housing Estimates and CA Department of Transportation, Long-Term Socio-Economic Forecasts by County information

FIGURE 3
ANNUAL POPULATION GROWTH RATES



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on CA Department of Finance, County/State Population & Housing Estimates; CA Department of Transportation, Long-Term Socio-Economic Forecasts by County; and U.S. Census Bureau, Population Estimates & Projections information

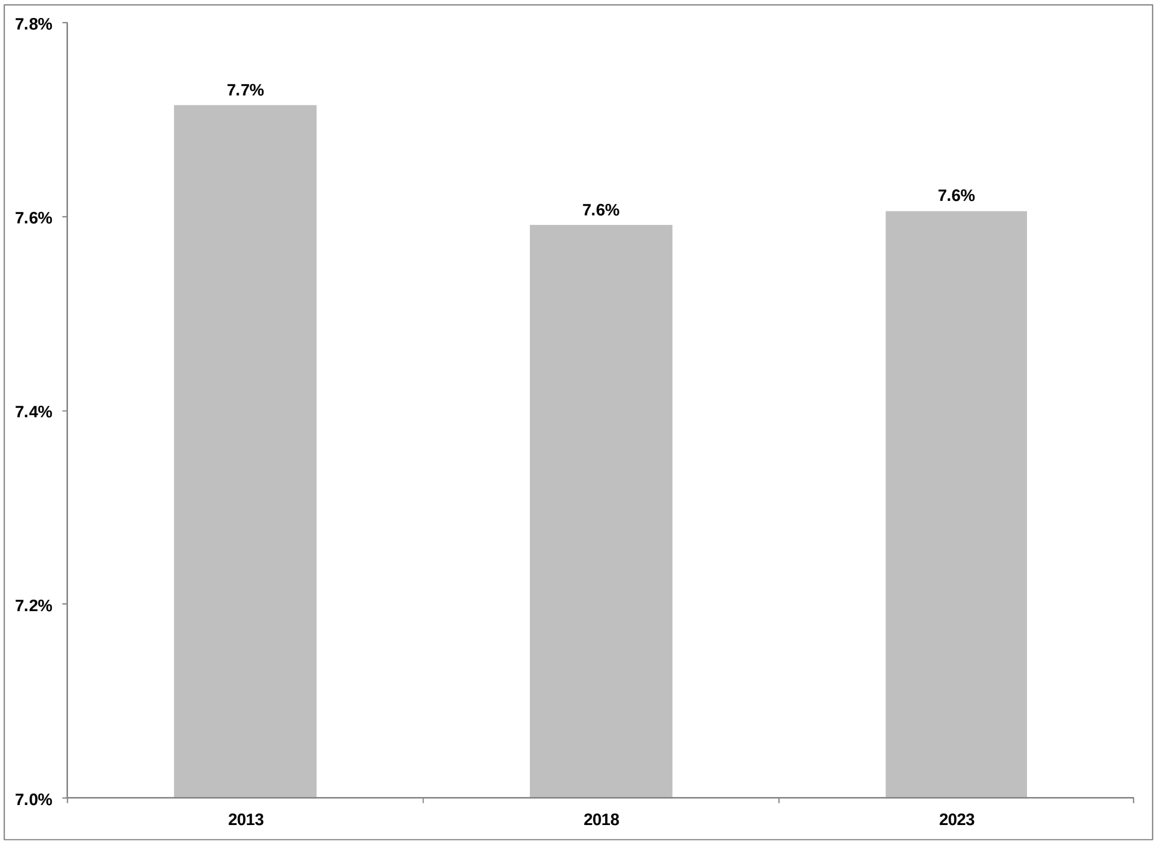
FIGURE 4
POPULATION GROWTH RATES

Area	*03-13*	*08-13*	*13-18 F*	*13-23 F*
County	9.5%	2.3%	3.7%	9.7%
Sac Region	13.2%	4.1%	5.4%	11.3%
CA	8.0%	3.5%	4.8%	10.1%
US	8.9%	4.0%	4.4%	8.4%

Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on CA Department of Finance, County/State Population & Housing Estimates; CA Department of Transportation, Long-Term Socio-Economic Forecasts by County; and U.S. Census Bureau, Population Estimates and Projections information

The County's role in the Sacramento Region is projected to decline over the next decade in terms of residents. As shown in Figure 5, the County's 2013 share of regional population (7.7 percent) is projected to drop by one basis point to 7.6 percent in 2018 and maintain a relatively steady share of regional population moving forward.

FIGURE 5
EL DORADO COUNTY SHARE OF REGIONAL POPULATION

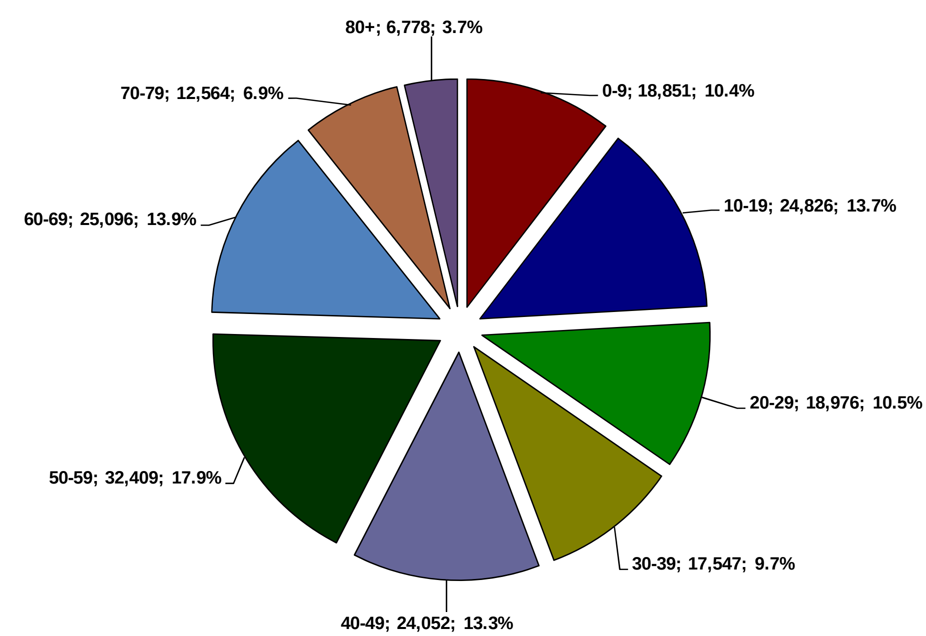


Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on CA Department of Finance, County/State Population & Housing Estimates and CA Department of Transportation, Long-Term Socio-Economic Forecasts by County information

Figure 6 shows the age composition of El Dorado County in 2013. At 18 percent (about 32,000 people), the 50 to 59 age bracket includes the highest proportion of the total population in the County. This age group's proportion is significantly higher in El Dorado County than in the Sacramento Region and California, where between around 13 and 14 percent of the total population is within this category. Other age brackets which comprise a rather large share of the County's population are 60 to 69 (almost 14 percent), 10 to 19 (nearly 14 percent), and 40 to 49 (just over 13 percent).

All categories 50 and above in El Dorado County experienced a positive shift in composition between 2003 and 2013. The largest increase was seen in the 60 to 69 year old age bracket with a positive shift of 5.2 percentage points. The greatest negative composition shift occurred in the 40 to 49 age bracket, losing 5.6 percentage points. El Dorado County's 70 to 79 age bracket is projected to show the highest shift in composition (over 3 percentage points) from 2013 to 2023, a trend also forecasted for the Region and state with smaller shifts, 2.5 and 2.2 percentage points, respectively.

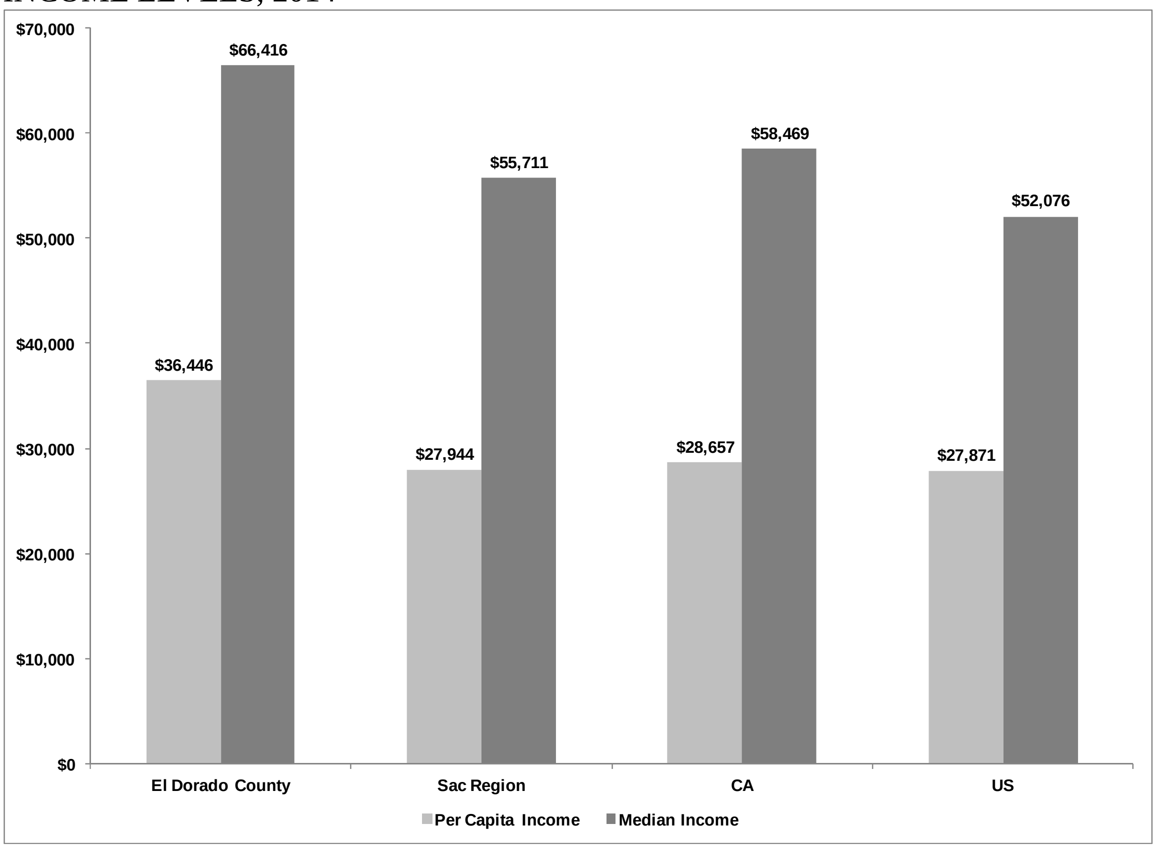
FIGURE 6
EL DORADO COUNTY AGE COMPOSITION, 2013



Center for Strategic Economic Resources, November 2014
Data Source: California Department of Finance, Race/Ethnicity Population with Age and Sex Detail

Income levels establish the economic-well being and earning potential of the population as well as the prospects for local-serving businesses to take advantage of the residents' spending power. El Dorado County incomes track above the regional, statewide, and national averages, indicating that County residents have a higher earning potential. Figure 7 shows that in 2014, El Dorado's per capita income was over $36,000 and its median household income was around $66,000. These levels are about 27 percent (per capita income) and 14 percent (median household income) higher than the 2014 statewide averages.

FIGURE 7
INCOME LEVELS, 2014

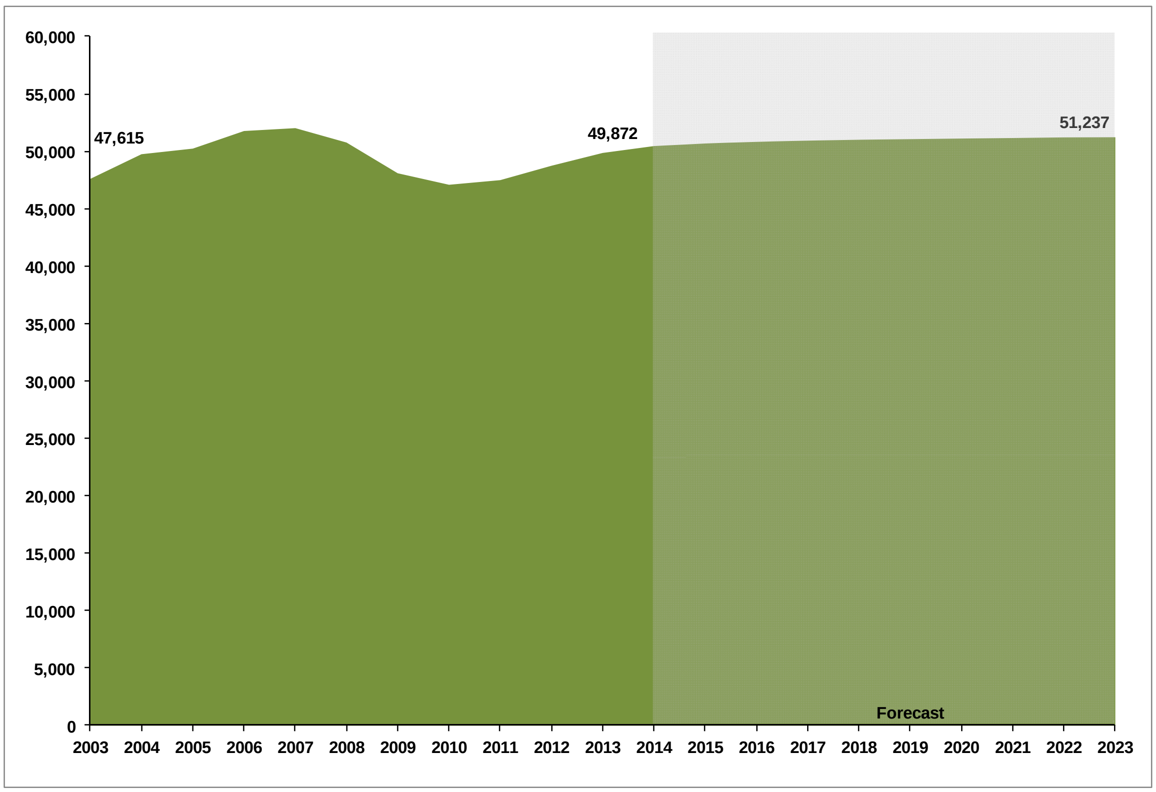


Center for Strategic Economic Research, November 2014
Data Source: ESRI Business Analyst Online, 2014 Demographic and Income Profile

Economic Trends

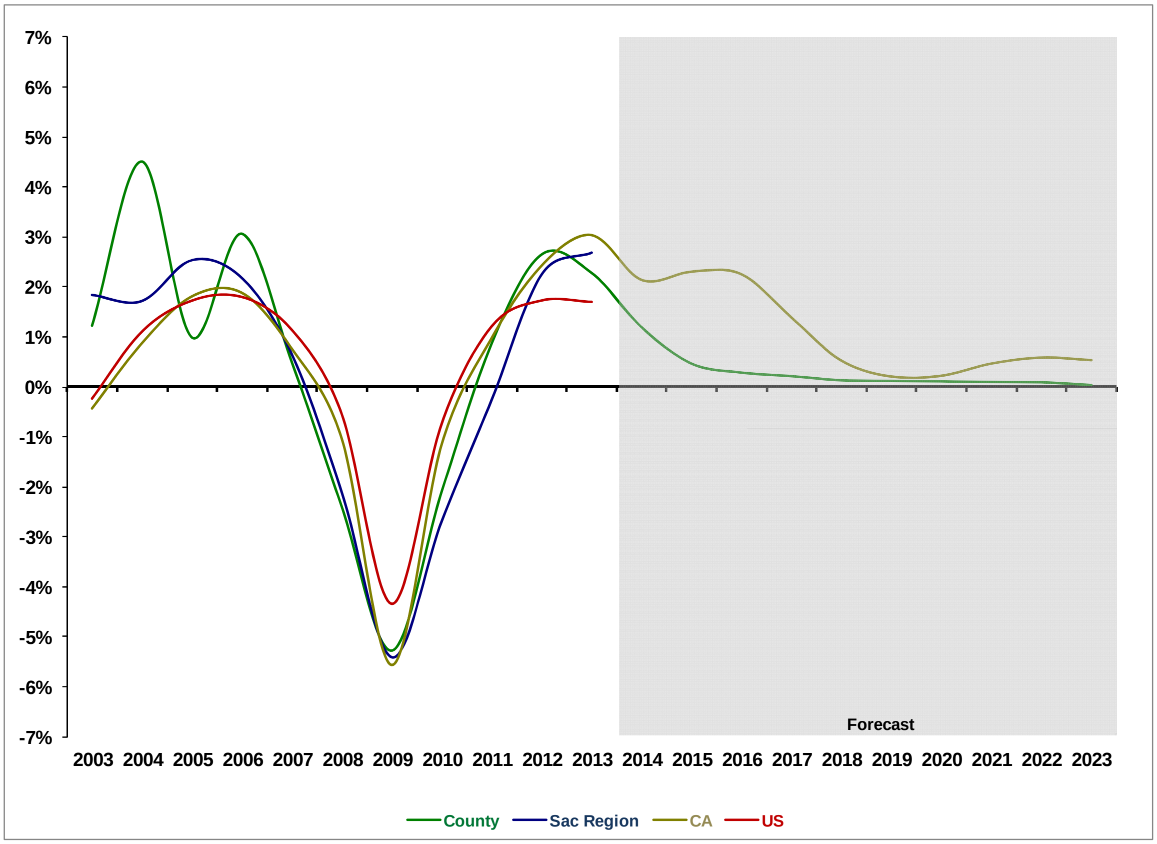
Trends in total employment supported by private and public sector establishments within El Dorado County are displayed in Figures 8, 9 and 10. The approximate 4,700 establishments in the County support approximately 50,000 wage and salary jobs, which is only about 2,000 jobs more than 10 years ago due to the associated dip from the recent recession. At its most recent peak (2007), the County contained over 52,000 jobs. Forecasts show that by 2023, El Dorado County will house over 51,000 jobs, only around 1,400 more jobs than the current level. The County's historical 10-year employment growth was significantly stronger than the Region and the state and slightly stronger than the nation; however, the forecast shows considerably slower growth than the state. In recent years, the County's annual growth has remained close to the regional and statewide averages. This pattern is expected to continue, but the state will begin outpacing the County moving forward.

FIGURE 8
EL DORADO COUNTY EMPLOYMENT



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com

FIGURE 9
ANNUAL EMPLOYMENT GROWTH RATES



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com; CA Employment Development Department, Employment by Industry Data; and U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages and Current Employment Statistics information

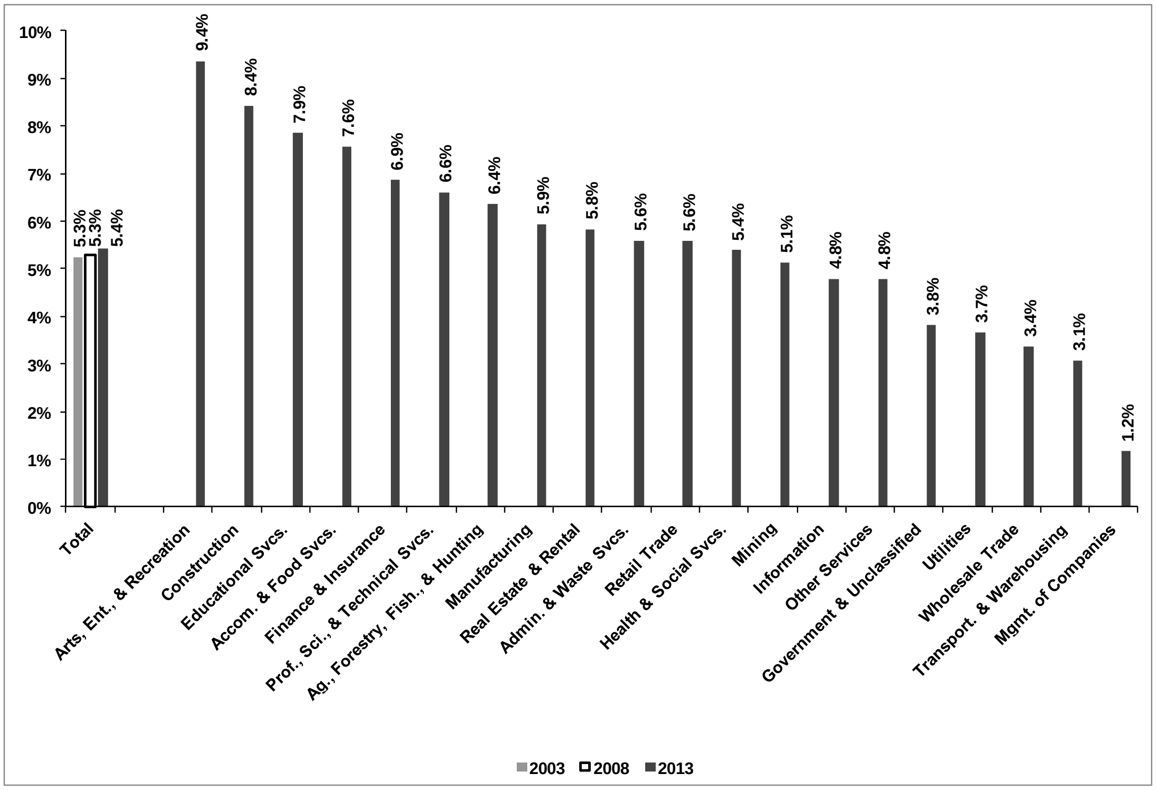
FIGURE 10
EMPLOYMENT GROWTH RATES

Area / Sector	*03-13*	*08-13*	*13-18 F*	*13-23 F*
County	4.7%	-1.8%	2.3%	2.7%
Sac Region	1.1%	-3.6%	-	-
CA	3.7%	-0.6%	8.8%	11.0%
US	4.6%	-0.6%	-	-

Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com; CA Employment Development Department, Employment by Industry Data; and U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages and Current Employment Statistics information

As shown in Figure 11, El Dorado County's share of total regional employment increased slightly from 5.3 percent in 2003 to 5.4 percent in 2013—a much smaller share than residents. The major sectors which support a significantly greater share of regional jobs than the County overall include Arts, Entertainment, & Recreation; Construction; Educational Services; Accommodation & Food Services; and Finance & Insurance.

FIGURE 11
EL DORADO COUNTY SHARE OF REGIONAL INDUSTRY EMPLOYMENT

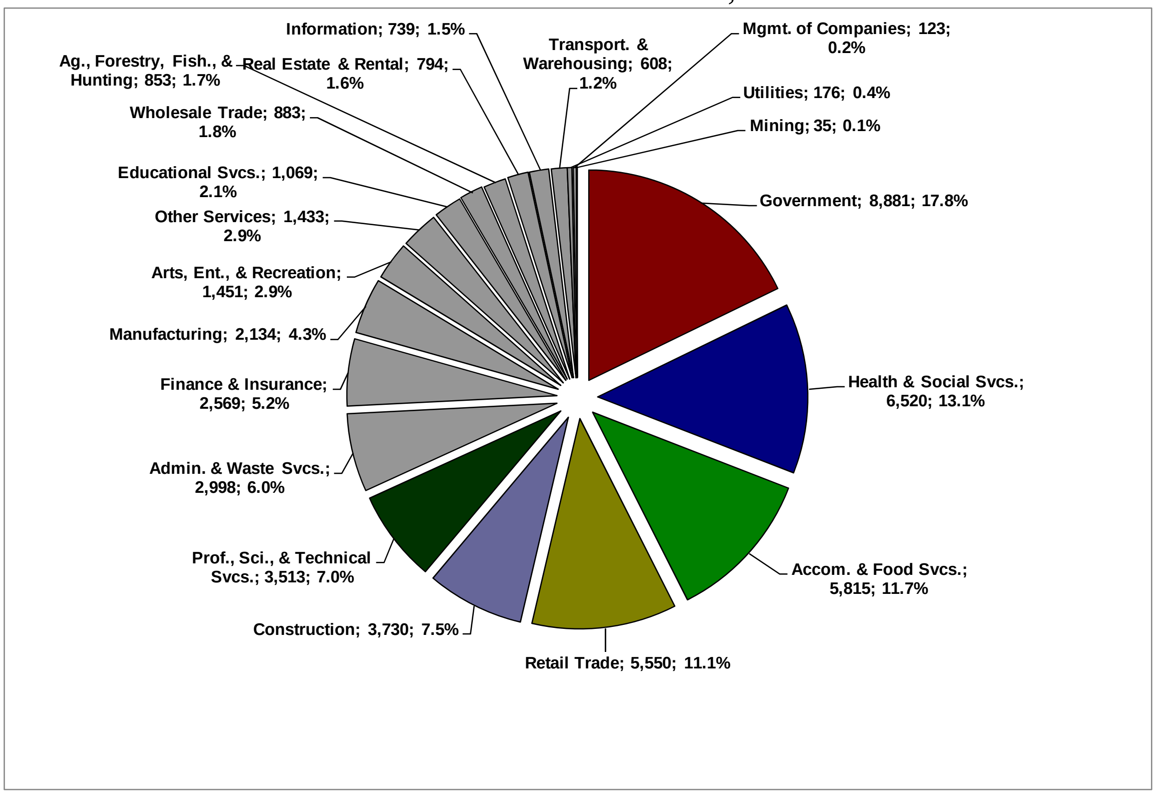


Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com; CA Employment Development Department, Employment by Industry Data; and U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages information

At the most basic level, a local economy can be broken down into groupings of private and public sector establishments based on the processes used to generate final products and services. These groupings are known as industries or sectors and follow a hierarchical structure which is most often summarized into 20 major categories. Payroll employment supported by establishments in the area is one of the most broadly used indicators of local economic performance for major sectors.

As shown in Figure 12, over 68 percent (or 34,000 jobs) of all payroll jobs in El Dorado County in 2013 were supported by establishments in six major sectors including Government; Health & Social Services; Accommodation & Food Services; Retail Trade; Construction; and Professional, Scientific & Technical Services. The remaining major sectors are fairly small with eight supporting less than 2 percent of all jobs (or fewer than 1,000 employees).

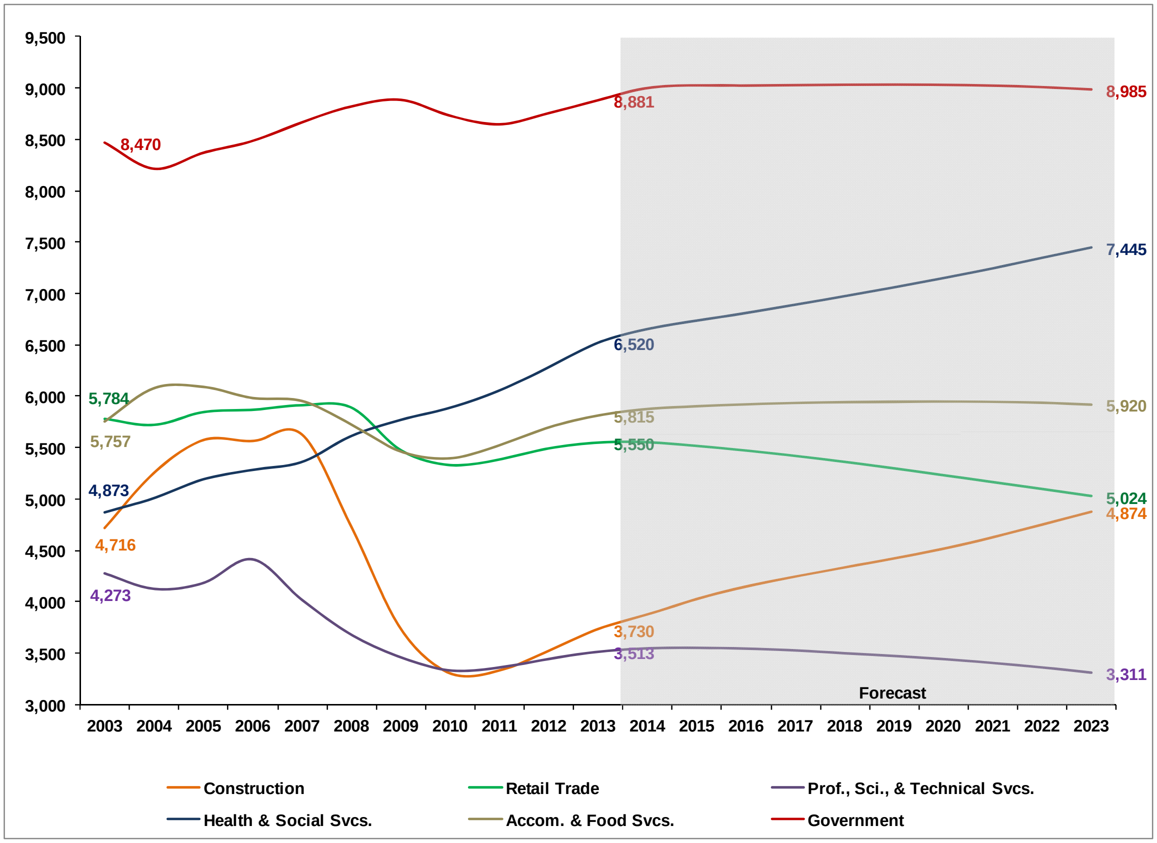
FIGURE 12
EL DORADO COUNTY INDUSTRY EMPLOYMENT, 2013



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com

El Dorado County's largest sectors have seen recovery in job growth since the employment dip from the economic downturn. As demonstrated in Figure 13, three of the larger sectors are expected to experience an upward trend over the next 10 years, with Health & Social Services and Construction, in particular, anticipated to demonstrate strong growth during the forecast period. Retail Trade and Professional, Scientific, & Technical Services, however, are forecast to lose jobs over the next 10 years.

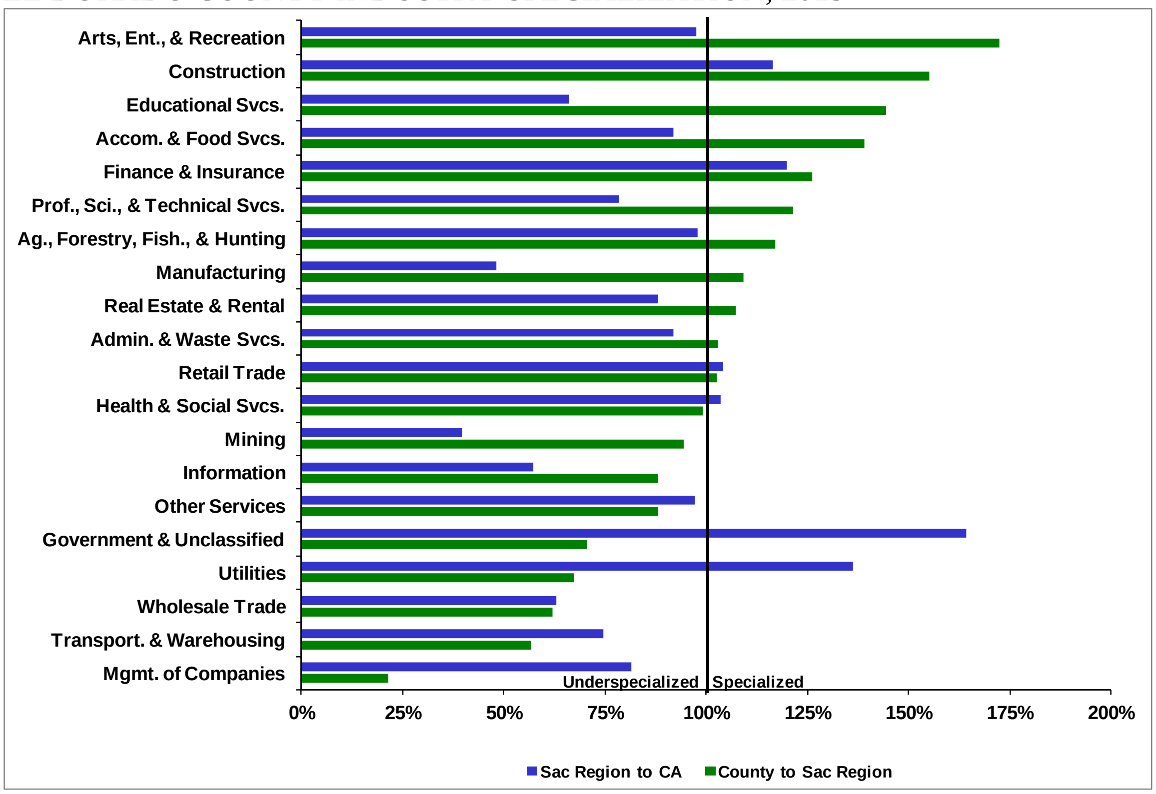
FIGURE 13
EL DORADO COUNTY LARGEST SECTOR EMPLOYMENT



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com; CA Employment Development Department, Employment by Industry Data; and U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages information

Figure 14 shows major sector specialization in 2013 as a relative measure of the share of total employment in the County compared to the larger Sacramento Region and the Region to the state (a result of 100 percent indicates that the shares are similar). El Dorado County is nearly two times more concentrated in the Arts, Entertainment, & Recreation sector than the Sacramento Region, an activity where the broader Region is somewhat underspecialized. Other major sectors where the County shows relatively high levels of specialization include Construction; Educational Services; Accommodation & Food Services; Finance & Insurance; and Professional, Scientific, & Technical Services. Specialized sectors in a particular area usually point to current or historical locational advantages, unique operating conditions, or activities geared toward export. For example, the high level of specialization in Arts, Entertainment, & Recreation is a result of the unique recreational amenities available in the County that attract visitors and lend to the local quality of life. There are several major sectors where both the County and the Region are underspecialized including Management of Companies; Transportation & Warehousing; Wholesale Trade; Other Services; Information; and Mining.

FIGURE 14
EL DORADO COUNTY INDUSTRY SPECIALIZATION, 2013



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com; CA Employment Development Department, Employment by Industry Data; and U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages information
Note: A measure of 100% means that the local area has the same share of total employment in the industry as the larger area.

Employment growth rates by major sector for El Dorado County, the Sacramento Region, California, and the United States are shown in Figure 15. Among the largest sectors, the County's Government sector posted stronger growth from 2003 to 2013 than all of the benchmarks while Construction and Retail Trade both posted similar or larger job declines than these areas over the past 10 years. The County's Accommodation & Food Services sector experienced much lower growth, although positive, than all of the areas while growth in the County's Health & Social Services sector was only above that of the nation. One of the smaller sectors, Educational Services posted very robust employment growth between 2003 and 2013, well above the Region, state, and nation. The Management of Companies sector saw the most significant level of negative growth in the last decade within the County, much weaker than the benchmarks.

Job growth forecasts for the major sectors in the coming ten years are mixed—some will still experience positive job growth, but at lower levels, while others' declines will be at a slower rate of loss. The only sector that is forecast to see significantly stronger growth over the next ten years versus the previous ten years is Construction, which will also exceed California's forecasted rate for this sector. Accommodation & Food Services and Finance & Insurance are also anticipated to see improvements in job growth. Growth for all the other sectors is forecast to be slower in the next 10 years and none of the major sectors, except Construction, are expected to outpace the level of growth in California.

FIGURE 15
INDUSTRY EMPLOYMENT GROWTH RATES

Area / Sector	*03-13*	*08-13*	*13-18 F*	*13-23 F*
County				
Ag., Forestry, Fish., & Hunting	-27.2%	-12.7%	-4.8%	-10.4%
Mining	101.9%	48.7%	-10.7%	-23.1%
Utilities	32.6%	-0.3%	-4.1%	-10.1%
Construction	-20.9%	-21.1%	16.1%	30.7%
Manufacturing	10.1%	-8.6%	-6.1%	-12.5%
Wholesale Trade	-0.1%	-3.7%	-1.2%	-3.4%
Retail Trade	-4.0%	-5.8%	-3.4%	-9.5%
Transport. & Warehousing	31.6%	-3.7%	-4.6%	-9.9%
Information	35.7%	-2.2%	2.2%	-0.6%
Finance & Insurance	-3.5%	-4.5%	0.8%	4.4%
Real Estate & Rental	-2.7%	-9.7%	-1.4%	-3.1%
Prof., Sci., & Technical Svcs.	-17.8%	-4.5%	-0.4%	-5.8%
Mgmt. of Companies	-33.9%	-4.6%	-4.4%	-12.4%
Admin. & Waste Svcs.	93.7%	-1.1%	6.1%	7.2%
Educational Svcs.	207.7%	25.8%	3.3%	6.0%
Health & Social Svcs.	33.8%	16.1%	6.9%	14.2%
Arts, Ent., & Recreation	-19.5%	-7.9%	-0.8%	-4.0%
Accom. & Food Svcs.	1.0%	1.5%	2.2%	1.8%
Other Services	16.1%	6.2%	0.6%	-0.4%
Government	4.9%	0.7%	1.7%	1.2%
Total	*4.7%*	*-1.8%*	*2.3%*	*2.7%*
CA				
Ag., Forestry, Fish., & Hunting	-18.0%	-0.6%	2.9%	2.1%
Mining	45.8%	8.6%	16.0%	17.2%
Utilities	6.5%	0.3%	-1.5%	-4.8%
Construction	-20.1%	-19.2%	18.9%	17.1%
Manufacturing	-19.0%	-12.2%	1.1%	-5.1%
Wholesale Trade	7.7%	-0.8%	2.7%	2.8%
Retail Trade	0.9%	-2.3%	3.5%	2.7%
Transport. & Warehousing	4.5%	-0.4%	8.3%	6.9%
Information	-5.4%	-5.4%	9.3%	10.5%
Finance & Insurance	-13.6%	-7.4%	6.0%	10.9%
Real Estate & Rental	-5.0%	-6.2%	5.4%	4.5%
Prof., Sci., & Technical Svcs.	25.7%	5.5%	11.6%	13.2%
Mgmt. of Companies	-12.4%	4.6%	6.6%	4.8%
Admin. & Waste Svcs.	5.0%	2.6%	24.6%	34.9%
Educational Svcs.	34.0%	15.1%	8.0%	9.2%
Health & Social Svcs.	35.3%	16.0%	12.9%	19.4%
Arts, Ent., & Recreation	14.5%	4.4%	9.9%	12.6%
Accom. & Food Svcs.	20.3%	6.6%	15.2%	21.0%
Other Services	2.2%	0.8%	7.6%	7.2%
Government	-2.3%	-5.8%	2.8%	6.2%
Total	*3.7%*	*-0.6%*	*8.8%*	*11.0%*

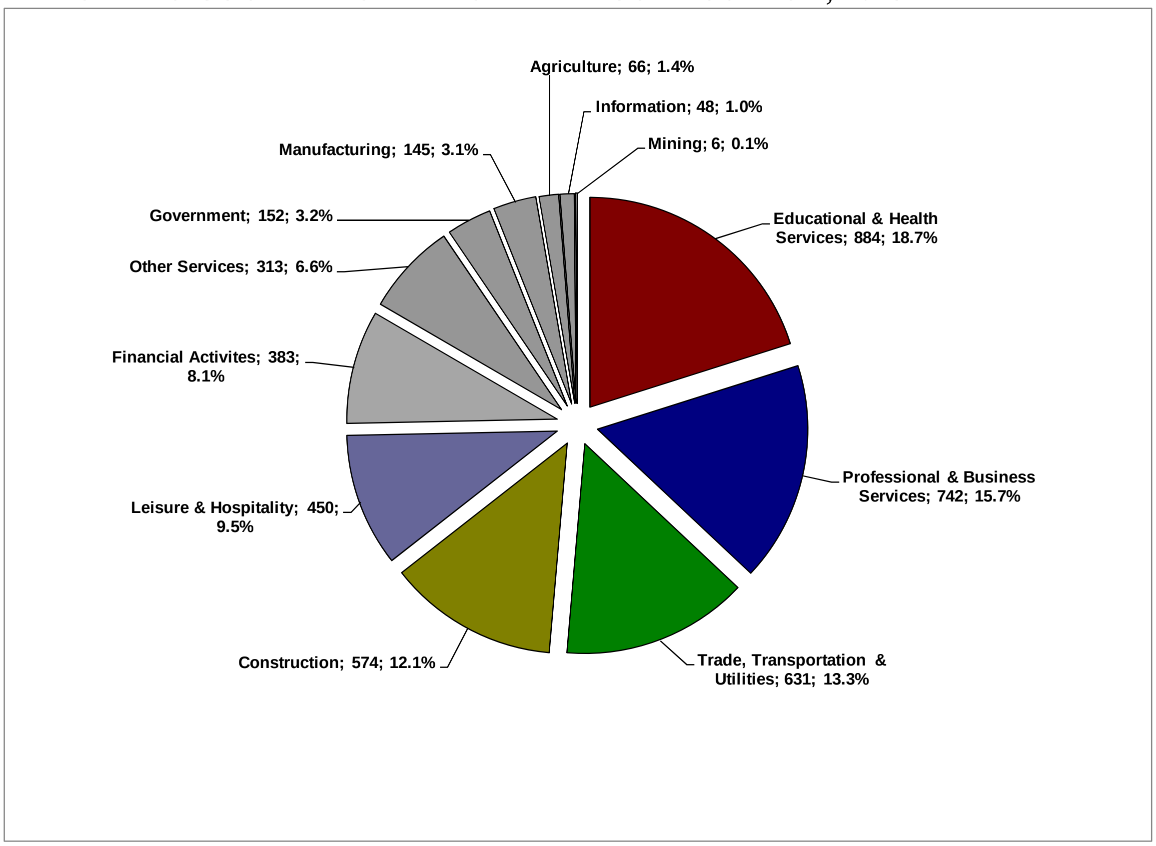
Area / Sector	*03-13*	*08-13*
Sac Region		
Ag., Forestry, Fish., & Hunting	7.2%	6.3%
Mining	-32.0%	-31.2%
Utilities	6.3%	-7.4%
Construction	-35.6%	-24.2%
Manufacturing	-19.3%	-12.4%
Wholesale Trade	-4.7%	-5.8%
Retail Trade	-1.0%	-1.6%
Transport. & Warehousing	6.6%	-7.2%
Information	-30.6%	-21.8%
Finance & Insurance	-17.4%	-14.8%
Real Estate & Rental	-10.5%	-7.5%
Prof., Sci., & Technical Svcs.	11.1%	-6.4%
Mgmt. of Companies	-1.7%	17.8%
Admin. & Waste Svcs.	19.9%	13.2%
Educational Svcs.	21.9%	3.9%
Health & Social Svcs.	42.4%	11.3%
Arts, Ent., & Recreation	18.5%	5.3%
Accom. & Food Svcs.	13.6%	2.6%
Other Services	1.7%	-2.6%
Government	-1.9%	-7.1%
Total	*1.1%*	*-3.6%*
US		
Ag., Forestry, Fish., & Hunting	-	-
Mining	51.7%	13.2%
Utilities	-4.3%	-1.2%
Construction	-13.5%	-18.6%
Manufacturing	-17.3%	-10.4%
Wholesale Trade	2.5%	-3.3%
Retail Trade	1.1%	-1.4%
Transport. & Warehousing	7.4%	-0.3%
Information	-15.8%	-10.0%
Finance & Insurance	-2.4%	-3.3%
Real Estate & Rental	-2.7%	-6.0%
Prof., Sci., & Technical Svcs.	23.1%	4.2%
Mgmt. of Companies	24.0%	9.9%
Admin. & Waste Svcs.	8.4%	3.9%
Educational Svcs.	24.3%	10.2%
Health & Social Svcs.	25.8%	10.2%
Arts, Ent., & Recreation	12.2%	3.2%
Accom. & Food Svcs.	17.8%	6.5%
Other Services	1.2%	-0.9%
Government	1.3%	-2.9%
Total	*4.6%*	*-0.6%*

Center for Strategic Economic Research, November 2014

Data Source: CSER estimates based on Moody's Economy.com; CA Employment Development Department, Employment by Industry Data; and U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages and Current Employment Statistics information

The 2013 composition of El Dorado County establishments, grouped into 12 major industry sectors, are shown in Figure 16. Of El Dorado County's approximate 4,700 establishments in 2013, about 69 percent of them were in the Educational & Health Services; Professional & Business Services; Trade, Transportation & Utilities; Construction; and Leisure & Hospitality sectors. The County has a very low proportion of establishments in the Other Services sector, just under 7 percent, relative to the Sacramento Region and California—this difference is made up in other sectors where the County has relatively high proportions, namely Educational & Health Services and Leisure & Hospitality.

FIGURE 16
EL DORADO COUNTY ESTABLISHMENT COMPOSITION, 2013



Center for Strategic Economic Research, November 2014
Data Source: California Employment Development Department, Annual Average Quarterly Census of Employment and Wages Data
Note: The sum of the sectors does not equal the total because 'total all industries' includes all establishments not included at sector level due to non-disclosure restrictions.

Over the past 10 years, El Dorado County saw stronger growth in the number of establishments in the Educational & Health Services; Professional & Business Services; and Mining sectors—all of sectors surpassed growth rates seen in the Sacramento Region and California. During this time period, the County saw the greatest losses of establishments in the Other Services; Agriculture; and Construction sectors. The Region and the state also saw establishment losses in the Agriculture and Construction sectors, but to a lesser extent. Other Services establishments in these areas, however, showed an increase of around 40 percent over the past 10 years.

FIGURE 17
ESTABLISHMENT GROWTH BY INDUSTRY

Area / Industry	*% Change 2003-2013*	*% Change 2008-2013*	*Area / Industry*	*% Change 2003-2013*	*% Change 2008-2013*
El Dorado County			CA		
Total All Industry	3.6%	-7.4%	Total All Industry	15.3%	0.9%
Agriculture	-30.5%	-17.5%	Agriculture	-22.0%	-6.8%
Mining	50.0%	20.0%	Mining	-3.8%	5.5%
Construction	-26.2%	-29.6%	Construction	-11.9%	-16.9%
Manufacturing	-21.2%	-23.3%	Manufacturing	-22.5%	-9.3%
Trade, Transportation & Utilities	-12.7%	-12.8%	Trade, Transportation & Utilities	-1.8%	-2.5%
Information	-2.0%	-7.7%	Information	-12.5%	-3.4%
Financial Activites	-3.3%	-8.4%	Financial Activites	-1.5%	-7.5%
Professional & Business Services	16.7%	0.1%	Professional & Business Services	10.4%	3.6%
Educational & Health Services	115.6%	99.1%	Educational & Health Services	-12.2%	-18.1%
Leisure & Hospitality	0.9%	-3.4%	Leisure & Hospitality	11.5%	4.4%
Other Services	-55.1%	-60.1%	Other Services	40.7%	6.7%
Government	1.3%	-1.3%	Government	12.7%	9.1%
Sac Region					
Total All Industry	12.9%	-4.2%			
Agriculture	-20.5%	-5.4%			
Mining	2.0%	2.0%			
Construction	-20.5%	-22.5%			
Manufacturing	-21.7%	-15.5%			
Trade, Transportation & Utilities	-5.0%	-4.1%			
Information	-17.0%	-9.5%			
Financial Activites	2.0%	-7.2%			
Professional & Business Services	10.8%	1.0%			
Educational & Health Services	-18.9%	-25.0%			
Leisure & Hospitality	8.8%	-0.3%			
Other Services	37.1%	-1.8%			
Government	5.2%	1.5%			

Center for Strategic Economic Research, November 2014
Data Source: California Employment Development Department, Annual Average Quarterly Census of Employment and Wages Data

Figure 18 shows that over 63 percent of El Dorado County's establishments employ between one and four employees followed by those with between 5 and 9 employees, combined accounting for almost 82 percent of all the County establishments. The benchmark areas, by comparison, have a much lower proportion of establishments which employ fewer than 10 employees: the Sacramento Region (nearly 74 percent), California (almost 49 percent), and United States (around 74 percent)—demonstrating the County's relative appeal to small business owners.

FIGURE 18
COMPOSITION OF ESTABLISHMENTS BY SIZE

Area	*1-4*	*5-9*	*10-19*	*20-49*	*50-99*	*100-249*	*250-499*	*500-999*	*1000+*
County	63.3%	18.5%	9.9%	5.6%	1.6%	0.8%	0.2%	0.0%	0.1%
Sac Region	54.4%	19.1%	13.0%	8.6%	2.8%	1.6%	0.3%	0.1%	0.1%
CA	36.2%	12.3%	11.5%	10.1%	6.1%	6.1%	3.8%	6.9%	6.9%
US	54.6%	18.9%	12.7%	8.6%	2.9%	1.6%	0.4%	0.2%	0.1%

Center for Strategic Economic Research, November 2014
Data Source: Data Source: U.S. Census Bureau, 2012 County and MSA Business Patterns

Figure 19 shows that the number of residents in El Dorado County who are self-employed fluctuated between 2002 and 2012. In 2012, there were nearly 16,000 nonemployer establishments, an increase of almost 18 percent over the 10-year time period, but a decline from 2007. Most nonemployer establishments are within the Professional, Scientific, & Technical Services; Other Services; and Construction sectors, all which experienced growth since 2002.

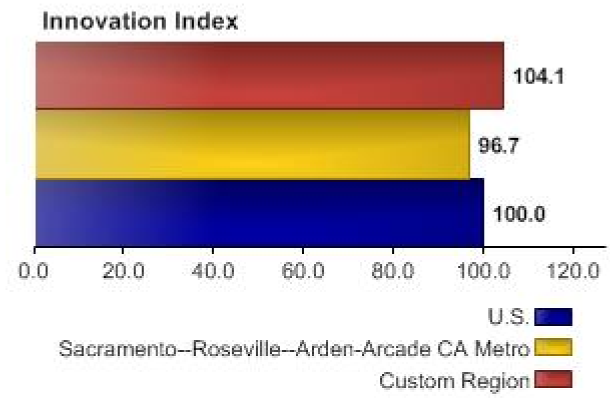
FIGURE 19
EL DORADO COUNTY NONEMPLOYER STATISTICS

	2002		*2007*		*2012*		*% Change*	
Sector	*Estab.*	*% of Total*	*Estab.*	*% of Total*	*Estab.*	*% of Total*	*2002-2012*	*2007-2012*
Total	13,177		16,258		15,526		17.8%	-4.5%
Prof., Sci., & Technical Svcs.	2,403	18.2%	2,927	18.0%	2,937	18.9%	22.2%	0.3%
Other Svcs.	1,864	14.1%	2,150	13.2%	2,156	13.9%	15.7%	0.3%
Construction	1,830	13.9%	2,249	13.8%	2,030	13.1%	10.9%	-9.7%
Real estate & Rental & Leasing	1,428	10.8%	2,083	12.8%	1,803	11.6%	26.3%	-13.4%
Retail Trade	1,411	10.7%	1,492	9.2%	1,324	8.5%	-6.2%	-11.3%
Administrative & Waste Svcs.	826	6.3%	1,188	7.3%	1,141	7.3%	38.1%	-4.0%
Health Care & Social Assistance	766	5.8%	898	5.5%	903	5.8%	17.9%	0.6%
Arts, Ent., & Recreation	612	4.6%	767	4.7%	838	5.4%	36.9%	9.3%
Finance & Insurance	413	3.1%	543	3.3%	407	2.6%	-1.5%	-25.0%
Educational Svcs.	256	1.9%	357	2.2%	406	2.6%	58.6%	13.7%
Manufacturing	313	2.4%	334	2.1%	364	2.3%	16.3%	9.0%
Wholesale Trade	262	2.0%	312	1.9%	293	1.9%	11.8%	-6.1%
Transportation & Warehousing	256	1.9%	310	1.9%	268	1.7%	4.7%	-13.5%
Information	163	1.2%	222	1.4%	237	1.5%	45.4%	6.8%
Accom. & Food Svcs.	173	1.3%	216	1.3%	209	1.3%	20.8%	-3.2%
Agriculture	180	1.4%	192	1.2%	184	1.2%	2.2%	-4.2%
Mining & Natural Resources	-	-	11	0.1%	19	0.1%	-	72.7%
Utilities	-	-	7	0.0%	7	0.0%	-	0.0%

Center for Strategic Economic Research, November 2014
Data Source: U.S. Census Bureau, EPCD
Note: - indicates data is not disclosed.

The Innovation in American Regions project further establishes the County's entrepreneurial opportunities. While the overall Innovation Index, shown in Figure 20, suggests that the core of the Sacramento Region is below the national average, El Dorado County's score is above the national average. Of the four components that make up the Innovation Index, El Dorado County scores above the national average on two (Productivity & Employment and Economic Well-Being) and below the national average on two (Economic Dynamics and Human Capital). The County's score is pulled down by weak performance in venture capital investment, presence of large employers, negative growth rates of young adult population, and high-tech employment share while strengths include patented technologies and per worker GDP growth.

FIGURE 20
INNOVATION INDEX



Data Source: Indiana Business Research Center, Innovation in American Regions
Note: Custom Region refers to El Dorado County

El Dorado County's taxable sales totaled over $1.7 billion in 2012, an increase of nearly 20 percent since 2002, as shown in Figure 21. While the County experienced stronger growth over this period than the Sacramento Region, it fell behind statewide growth of nearly 27 percent.

FIGURE 21
TOTAL TAXABLE SALES

Area	*2002*	*2007*	*2012*	*%Change 2002-2012*	*% Change 2007-2012*
County	$1,451,334	$1,896,995	$1,740,172	19.9%	-8.3%
Sac Region	$28,427,739	$35,092,759	$33,223,898	16.9%	-5.3%
CA	$440,950,094	$561,050,149	$558,387,250	26.6%	-0.5%

Center for Strategic Economic Research, November 2014
Data Source: State of California Board of Equalization

Figure 22 shows El Dorado County taxable sales of $9.58 per person were below the per capita levels of the Sacramento Region at $14.18 and California at $14.82. The County's nearly 8 percent growth of per capita taxable sales from 2002 to 2012 was significantly higher than the Region at around 2 percent, but lower than the state at almost 17 percent.

FIGURE 22
PER CAPITA TAXABLE SALES

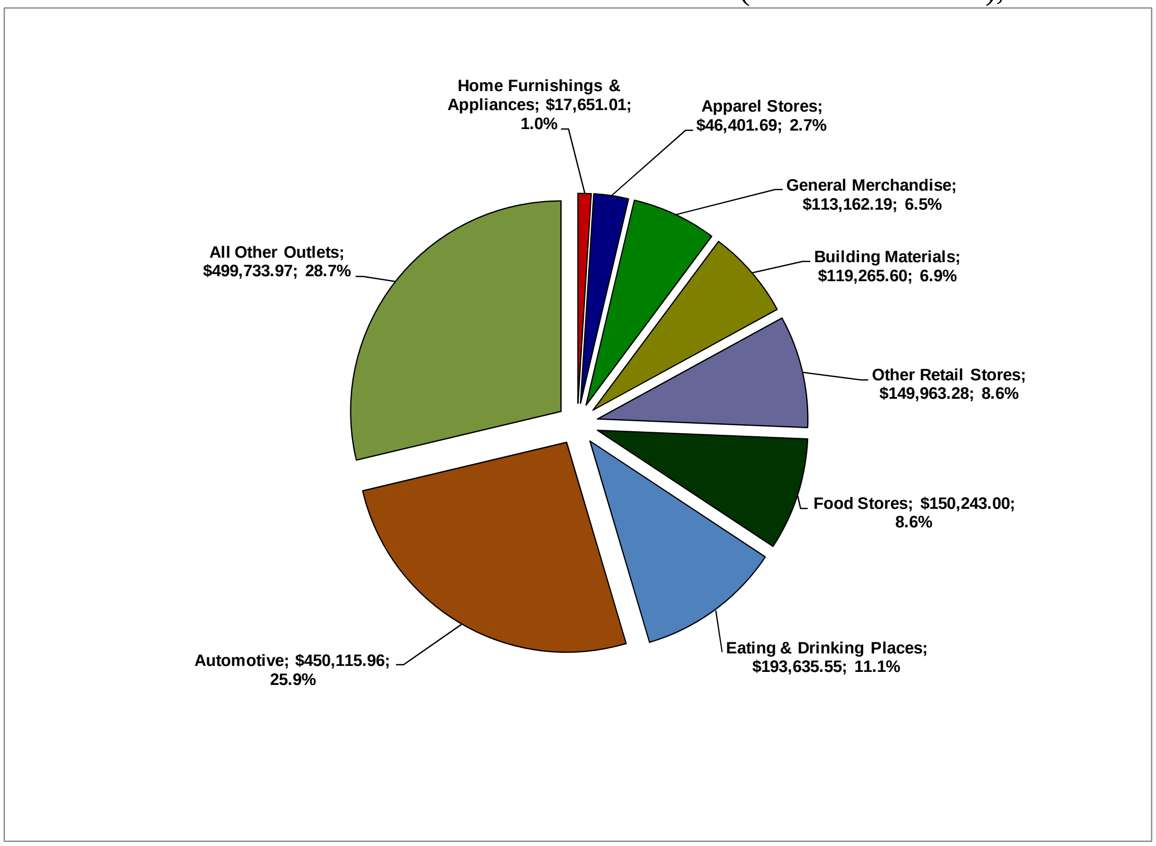
Area	*2002*	*2007*	*2012*	*%Change 2002-2012*	*% Change 2007-2012*
County	$8.89	$10.76	$9.58	7.8%	-11.0%
Sac Region	$13.98	$15.69	$14.18	1.5%	-9.6%
CA	$12.70	$15.41	$14.82	16.7%	-3.8%

Center for Strategic Economic Research, November 2014
Data Source: State of California Board of Equalization and California Department of Finance

As shown in Figure 23, two types of businesses each make up over 25 percent of total taxable sales in El Dorado County, All Other Outlets and Automotive. These industries contributed roughly $500 million and $450 million in 2012 taxable sales, respectively. These are followed by Eating and Drinking Places with almost $194 million and Food Stores with just over $150 million.

Business classified as All Other Outlets also comprised the largest share of total taxable sales in the Sacramento Region and California. Between 2002 and 2012, Apparel Stores saw the highest growth among the industries in all three areas: El Dorado County (around 92 percent), Sacramento Region (almost 108 percent), and California (about 49 percent).

FIGURE 23
EL DORADO COUNTY TAXABLE SALES BY TYPE (IN THOUSANDS), 2012



Center for Strategic Economic Research, November 2014
Data Source: State of California Board of Equalization and California Department of Finance

Real Estate Trends

Commercial and residential real estate availability and costs are key components in business operations and personal living considerations. In terms of the residential market, housing unit growth over the past decade in El Dorado County has tracked higher than population growth. In 2013, El Dorado County contained over 88,000 single- and multi-family housing units, an increase of almost 16 percent, or nearly 12,000 more units, than 10 years prior (Figure 24).

FIGURE 24
HOUSING UNITS

Area	*2003*	*2008*	*2013*	*% Change 2003-2013*	*% Change 2008-2013*
County	76,345	86,121	88,159	15.5%	2.4%
Sac Region	818,898	918,934	932,140	13.8%	1.4%
California	12,619,213	13,503,834	13,785,855	9.2%	2.1%
US*	120,977,467	129,065,264	132,802,859	9.8%	2.9%

Center for Strategic Economic Research, November 2014
Data Sources: California Department of Finance, E-5 Population and Housing and U.S. Census Bureau, Population Division
Note: Data represents January 1 estimates for year specified.
* US Data represents July 1 estimates for year specified.

El Dorado County has some of the highest housing prices in the Sacramento Region. In September 2014, the County's median home price was $364,650, below Placer County's median home sales price of $384,850, but higher than other counties in the Region which ranged from $215,000 to $344,230 (California Association of Realtors). Relative affordability is still also an issue where at the end of 2013, the median home sale price in El Dorado County was 5.4 times the median household income versus between 3.6 and 5.3 times for the other counties within the Region, as shown in Figure 25.

FIGURE 25
HOME PRICE TO MEDIAN HOUSEHOLD INCOME RATIOS

Area	*2013*
El Dorado County	5.4
Placer County	4.7
Sacramento County	4.3
Sutter County	3.6
Yolo County	5.3
Yuba County	3.9

Center for Strategic Economic Research, November 2014
Data Source: California Association of Realtors (CAR) with DataQuick Information Systems and U.S. Census Bureau, 2013 American Community Survey

As shown in Figure 26, over 3,300 single-family and condominium homes were sold in El Dorado in 2013, a year-over-year increase of nearly 2 percent which places below Placer and Yolo County's respective growth rates of around 3 percent and 5 percent, but above the negative growth rates seen in Sacramento, Sutter, and Yuba Counties.

FIGURE 26
HOME SALES TRANSACTIONS

Area	*2012*	*2013*	*% Change 2012-213*
El Dorado County	3,276	3,339	1.9%
Placer County	7,972	8,186	2.7%
Sacramento County	24,472	23,188	-5.2%
Sutter County	1,231	1,181	-4.1%
Yolo County	2,253	2,367	5.1%
Yuba County	1,136	1,058	-6.9%

Center for Strategic Economic Research, November 2014
Data Source: Data Source: California Association of Realtors
(CAR) with DataQuick Information Systems

Figure 27 provides index scores of various cost categories relative to the national average of 100. Overall, the cost of living indices of the communities within El Dorado County vary. El Dorado Hills' overall index is 171, much higher than other communities within the Sacramento Region with that variation largely attributed to the cost of housing. With overall indices of 121 and 135, Placerville and South Lake Tahoe place between the other regional communities presented in the figure.

FIGURE 27
COST OF LIVING INDICES

Cost of Living Indices	*El Dorado Hills*	*Placerville*	*South Lake Tahoe*	*Elk Grove*	*Folsom*	*Roseville*	*Sacramento*
Overall	171	121	135	131	157	140	113
Grocery	114	114	114	114	114	114	114
Health	101	101	101	102	102	104	102
Housing	299	145	187	178	261	201	122
Utilities	115	115	115	113	113	113	113
Transportation	115	115	115	113	113	116	113
Miscellaneous	106	106	106	102	102	107	102

Center for Strategic Economic Research, November 2014
Data Source: Sperling's Best Places
Note: As of June 2014. A score of 100 equals the national average.

Figure 28 provides third quarter 2014 vacancy rate, net absorption, and lease rate information for the commercial real estate market in El Dorado County compared to the overall Sacramento Market (El Dorado, Placer, Sacramento, and Yolo Counties). The County's 19.3 percent office vacancy rate is much higher than the overall market's rate of 14.2 percent, which is reflected in its lower lease rates of $17.75 compared to the overall market of $20.32. Both the County and the overall market had positive net absorption in this period.

Industrial space in El Dorado County is undersupplied and relatively expensive. The submarket within El Dorado County for which information is available shows 6.3 percent industrial vacancy rate compared to 11.1 percent in the Sacramento Market. The Folsom/El Dorado submarket saw negative net absorption of nearly 12,000 square feet. The County's average asking industrial lease rate in the third quarter of 2014 was $9.60 versus $5.09 in the overall Sacramento Market. This limits growth and attraction potential of companies requiring industrial space.

The County also has a low vacancy rate for retail space, 6.8 percent versus 9.2 percent in the overall market, and saw positive net absorption in the third quarter of 2014. At $19.46 per square foot per month, El Dorado County retail space lease rates are much higher than the Sacramento Market at $16.26.

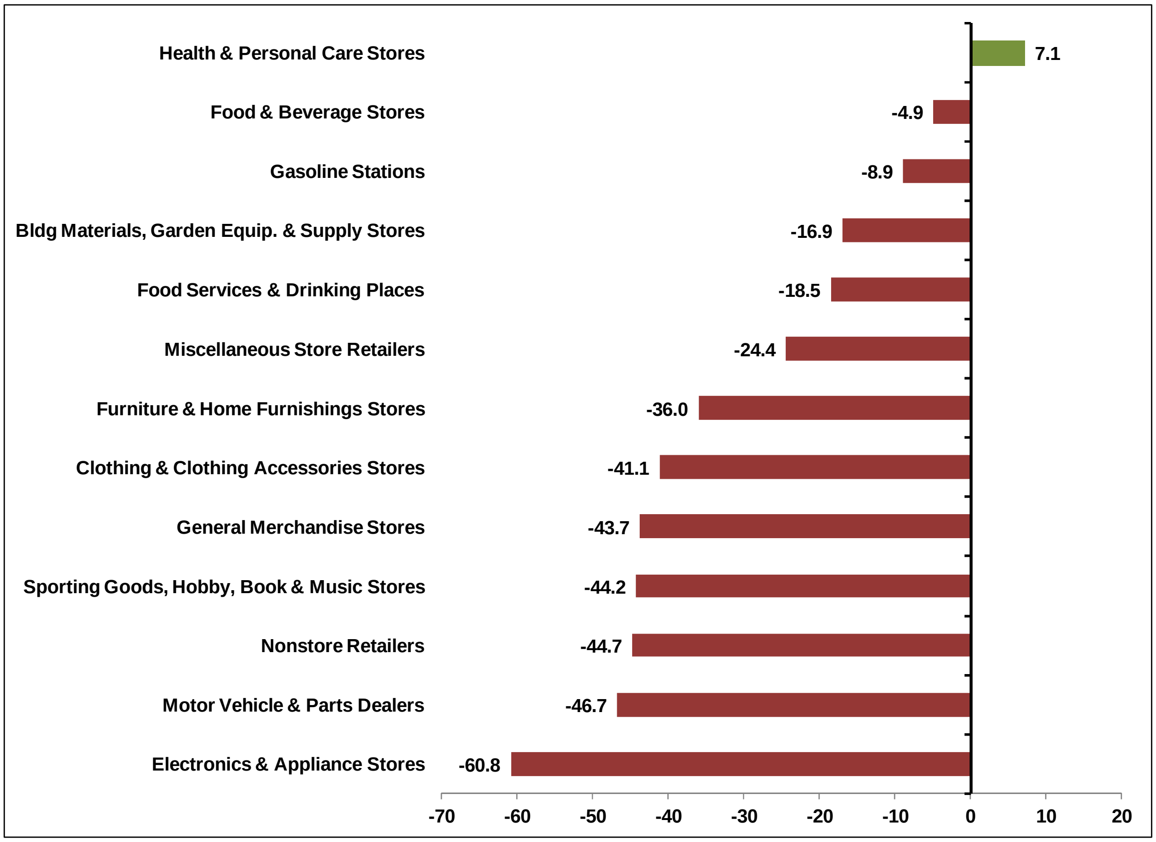
FIGURE 28
COMMERCIAL REAL ESTATE INDICATORS, Q3 2014

Type/Market	*Vacancy Rate*	*Net Absorption (in sq. ft.)*	*Average Asking Lease Rate $/SF/MO*
Office			
El Dorado County	19.3%	50,119	$17.75
Sacramento Market	14.2%	731,265	$20.32
Industrial			
Folsom/El Dorado Submarket	6.3%	-11,789	$9.60
Sacramento Market	11.1%	2,321,700	$5.09
Retail			
El Dorado County	6.8%	45,871	$19.46
Sacramento Market	9.2%	1,063,769	$16.26

Center for Strategic Economic Research, November 2014
Data Source: Costar Group 3rd Quarter Market Reports
Note: Sacramento Market includes submarkets in El Dorado, Placer, Sacramento and Yolo Counties.

El Dorado County has a sizeable retail gap where potential retail demand exceeds retail sales by 66 percent, indicating that wealth is leaking out of the local economy across nearly every standard retail category, except for health & personal care stores (Figure 29).

FIGURE 29
RETAIL GAP ANALYSIS



Center for Strategic Economic Research, November 2014
Data Source: ESRI Business Analyst Online
Note: Leakage (red) and surplus (green) factors are measured on a +/- 0 to 100 scale with 100 reflecting complete leakage/surplus.

Economic Development Opportunities

This section provides information on industries which provide opportunities for economic development including those that create net new wealth for the County (base industries) and potential viable clusters and an overview of the County's establishment characteristics.

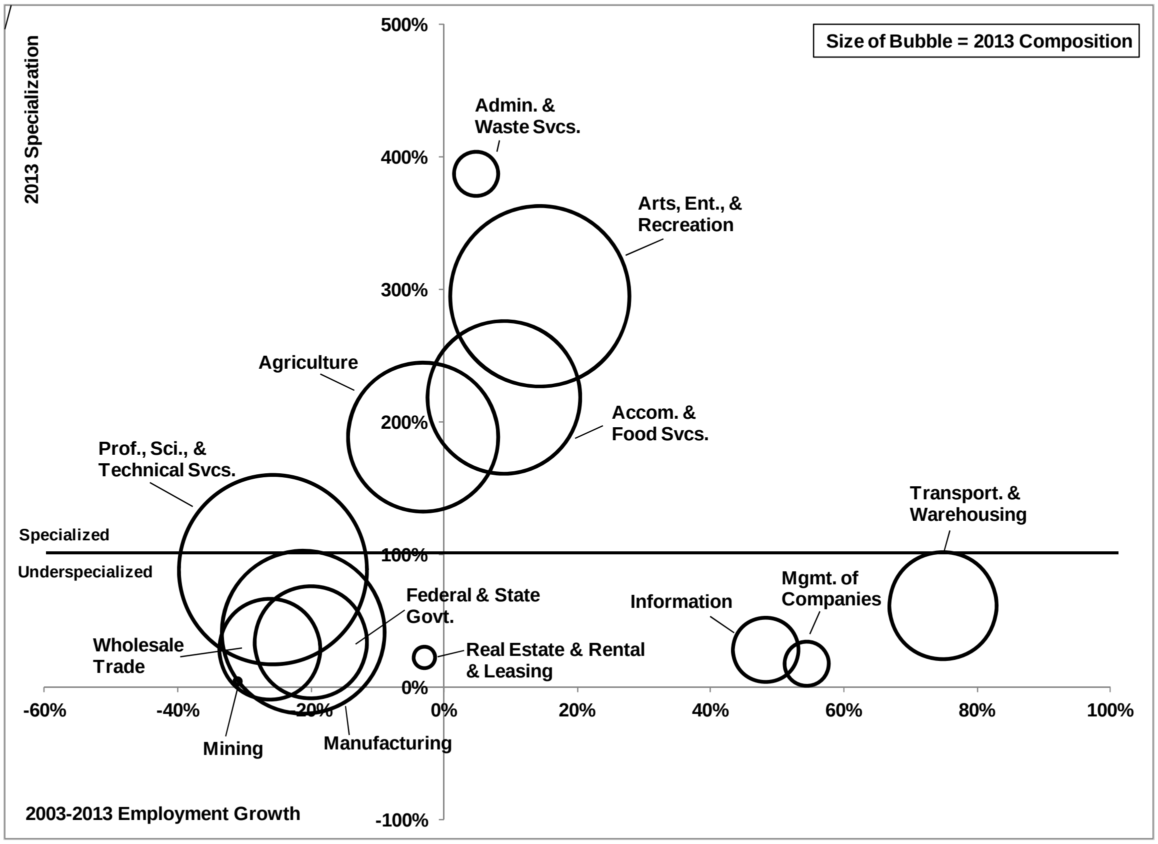
Economic Base & Local-Serving Sectors

Specific components of major industry sectors usually play one of two primary roles depending on whether their activities cause changes in the local economic structure and drive development or if the activities are generally consequences of local development. The first role describes what is known as a base activity while the latter is essentially a local-serving component. Base activities are typically described by the following characteristics: they produce a significant amount of goods and services for export; bring net new wealth into an economy; and face few geographical constraints, allowing them to operate anywhere that they deem attractive. On the other hand, local-serving components normally move wealth around a local area, produce goods and services mainly for local consumption, and are strategically located to serve a local market (residents or base sectors). Base sectors are generally seen as active drivers of economic development while local-serving sectors are passive participants, simply responding to economic and demographic growth trends. In El Dorado County, 13 of the 20 major sectors contain base activities with nine of the 11 supporting a mix of both base and local-serving components and the remaining four composed entirely of base activities. Only seven of the County's major sectors are specifically local-serving.[*]

Figures 30, 31, and 32 provide information on the County's economic base and the mix of base and local-serving activities. Around 23 percent of all employment in the County is supported by base activities, a considerably lower share than the state (about 33 percent). The two major sectors with the largest amount of base employment include Professional, Scientific, & Technical Services and Arts, Entertainment & Recreation, which together contain approximately 37 percent of all base component employment in the County. Several of the base components within major sectors are specialized and, in all of these cases, employment has been increasing. Most of the underspecialized base component sectors, however, have all experienced employment declines recently. Overall, in the past 10 years, employment in the base components of the local economy has declined about 7 percent compared to 6 percent growth for the local-serving activities in the same time period. Employment forecasts for the next 10 years show essentially no growth for base activities while local sectors show an improved growth rate of nearly 9 percent through 2023. In both the historical and forecast 10-year periods, base components showed a mix of negative and positive growth; however, the forecast period shows an easing of declining growth among the activities.

[*] Refer to the Research Methodology section for a listing of specific base and local serving components within each major sector.

FIGURE 30
EL DORADO COUNTY BASE COMPONENT SUMMARY



Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com

FIGURE 31
EL DORADO COUNTY BASE AND LOCAL COMPONENT EMPLOYMENT

	2013 Employment		2003-2013 % Growth		2008-2013 % Growth	
Sector	Base	Local	Base	Local	Base	Local
Agriculture	1,381	-	-3.2%	-	0.6%	-
Natural Resources & Mining	2	1	-31.0%	-70.4%	37.3%	-35.3%
Utilities	-	156	-	16.9%	-	-8.9%
Construction	-	3,337	-	-29.5%	-	-30.5%
Manufacturing	1,646	-	-21.1%	-	-29.2%	-
Wholesale Trade	634	-	-26.2%	-	-29.9%	-
Retail Trade	-	5,519	-	-4.7%	-	-7.3%
Transportation & Warehousing	716	11	74.9%	-78.3%	29.5%	-88.3%
Information	263	272	48.2%	-26.2%	-31.9%	-30.0%
Finance & Insurance	-	3,145	-	12.6%	-	11.0%
Real Estate & Rental & Leasing	28	768	-2.9%	13.9%	3.8%	3.8%
Prof., Sci., & Technical Svcs.	2,198	514	-25.7%	-22.5%	-17.1%	-38.0%
Mgmt. of Companies	122	-	54.5%	-	52.6%	-
Administrative & Waste Svcs.	122	2,313	4.8%	30.2%	-26.3%	-18.3%
Educational Svcs.	-	860	-	203.1%	-	19.9%
Health Care & Social Assistance	-	6,342	-	20.9%	-	5.8%
Arts, Ent., & Recreation	2,011	37	14.3%	-27.1%	27.9%	69.3%
Accom. & Food Svcs.	1,447	4,597	8.9%	3.6%	5.0%	3.9%
Other Svcs.	-	1,668	-	-1.5%	-	-10.8%
Government	779	8,809	-20.0%	17.8%	-13.4%	9.3%
Total	11,349	38,349	-7.0%	6.0%	-7.9%	-3.5%
Percent of Total	22.8%	77.2%	-	-	-	-

Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody’s Economy.com

FIGURE 32
EL DORADO COUNTY BASE AND LOCAL COMPONENT EMPLOYMENT FORECAST

	2013 Employment		*2013-2018 % Growth*		*2013-2023 % Growth*	
Sector	*Base*	*Local*	*Base*	*Local*	*Base*	*Local*
Agriculture	1,381	-	4.4%	-	1.1%	-
Natural Resources & Mining	2	1	-100.0%	-100.0%	-100.0%	-100.0%
Utilities	-	156	-	1.2%	-	-6.0%
Construction	-	3,337	-	27.4%	-	25.6%
Manufacturing	1,646	-	-0.5%	-	-7.7%	-
Wholesale Trade	634	-	-6.4%	-	-11.2%	-
Retail Trade	-	5,519	-	-0.8%	-	-12.7%
Transportation & Warehousing	716	11	-8.2%	0.0%	-10.7%	7.6%
Information	263	272	10.1%	-9.0%	13.7%	-18.2%
Finance & Insurance	-	3,145	-	2.1%	-	4.7%
Real Estate & Rental & Leasing	28	768	42.7%	2.7%	59.6%	-1.1%
Prof., Sci., & Technical Svcs.	2,198	514	11.0%	3.2%	10.7%	-5.5%
Mgmt. of Companies	122	-	2.9%	-	-2.0%	-
Administrative & Waste Svcs.	122	2,313	33.6%	23.2%	40.3%	29.4%
Educational Svcs.	-	860	-	8.7%	-	10.9%
Health Care & Social Assistance	-	6,342	-	14.1%	-	21.5%
Arts, Ent., & Recreation	2,011	37	-1.8%	-4.5%	-5.3%	-2.8%
Accom. & Food Svcs.	1,447	4,597	5.5%	10.5%	0.2%	10.9%
Other Svcs.	-	1,668	-	4.1%	-	-1.5%
Government	779	8,809	2.0%	4.1%	-0.9%	5.0%
Total	11,349	38,349	2.9%	8.8%	-0.3%	8.5%

Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com

Viable Industries & Clusters

Another perspective on economic development can be gained by taking a more in-depth look at the dynamics within the local economy. By breaking apart major sectors into their more narrowly-defined components, specific business activities can be arranged into industry clusters, groupings of interrelated firms. While El Dorado County does not necessarily possess fully-integrated industry clusters, there are certainly core activities within the County economy that already play a role in or can be networked into larger clusters that have a regional presence or are more broadly geographically dispersed.

Figure 33 lists five clusters that present economic development potential in El Dorado County based principally on economic performance within the core activities grouped into the clusters. All of the core activities associated with the five clusters fall within (or just under in some cases) the top quartile of approximately 281 detailed activities ranked on indexed economic performance across 12 key factors including historical and forecasted growth, composition and historical shift in composition, and specialization and historical change in specialization for both employment and output. The clusters range in current size from around 1,200 jobs (Environmental & Architectural/Engineering Services) to over 8,300 jobs (Arts, Entertainment, Recreation & Visitor Services). While economic development potential for all of the clusters appears viable based on healthy economic performance, many of the core activities also present characteristics that further establish opportunities and generate unique benefits in the County. Many of the core activities typically act as main suppliers to the largest sectors in the Sacramento Region and El Dorado County or heavily use the products and services of the large sectors as inputs (listed as regional linkages, RL, in the figure). Additionally, some of the core activities generally create a relatively large multiplier effect in the economy accounting for the combination of direct employment, jobs generated by demand created on suppliers of goods and services, and employee spending (identified as employment multiplier, EM, in the figure). A number of the core activities also supports compensation (salaries/wages and benefits) levels above the industry average (noted as above average wages, W, in the figure). The typical employment structure supported by several of the core activities makes use of occupations with a strong presence amongst the local resident workforce (listed as occupation match, OM, in the figure). Finally, quite a few of the core cluster components are base activities and generate net new wealth in the County (identified as base activity, BA, in the figure). Certain core activities present a number of these benefits like the Computer Systems Design & Related Services activity in the Business & Financial Services cluster while others have none or just one like Nursing Care Facilities under the Medical cluster.

FIGURE 33
POTENTIAL VIABLE CLUSTERS AND CORE ACTIVITIES

Environmental & Architectural/Engineering Services (1,168 jobs)	**Agriculture & Food (1,835 jobs)**
✓ Architectural & Structural Metals Manufacturing—W, BA ✓ Architectural; engineering; & related services—RL, OM ✓ Management; scientific; & technical consulting services—OM, BA ✓ Scientific research & development services—EM, OM, W, BA ✓ Waste treatment & disposal—RL, EM, W ✓ Remediation & other waste management services—RL, EM, W	✓ Agriculture—BA ✓ Animal Food Manufacturing—BA ✓ Grain & Oilseed Milling—BA ✓ Sugar & Confectionery Product Manufacturing—BA ✓ Fruit & Vegetable Preserving & Specialty Food Manufacturing—EM, W, BA ✓ Dairy Product Manufacturing—BA ✓ Bakeries & Tortilla Manufacturing—W, BA ✓ Other Food Manufacturing—BA ✓ Beverage Manufacturing—EM, W, BA ✓ Pesticide, Fertilizer, & Other Agricultural Chemical Manufacturing—BA ✓ Agriculture, Construction, & Mining Machinery Manufacturing—BA ✓ Grocery & Related Product Merchant Wholesalers—RL, OM, W, BA ✓ Farm Product Raw Material Merchant Wholesalers—RL, W, BA ✓ Beer, Wine, & Distilled Alcoholic Beverage Merchant Wholesalers—RL, W, BA ✓ Specialty Food Stores—W ✓ Beer, Wine, & Liquor Stores—W
Medical (6,487 jobs)	**Business & Financial Services (7,834 jobs)**
✓ Pharmaceutical & Medicine Manufacturing—EM, W, BA ✓ Navigational, Measuring, Electromedical, & Control Instruments Manufacturing—W, BA ✓ Medical Equipment & Supplies Manufacturing—EM, W, BA ✓ Drugs & Druggists' Sundries Merchant Wholesalers—RL, W, BA ✓ Health & Personal Care Stores—OM, W ✓ Other Professional, Scientific, & Technical Services—RL, BA ✓ Offices of Physicians—OM, W ✓ Offices of Dentists—W ✓ Offices of Other Health Practitioners—W ✓ Outpatient Care Centers—RL, OM, W ✓ Medical & Diagnostic Laboratories—RL, W ✓ Home Health Care Services ✓ Other Ambulatory Health Care Services—RL, W ✓ General Medical & Surgical Hospitals—RL, OM, W ✓ Psychiatric & Substance Abuse Hospitals—RL, W ✓ Specialty (Except Psychiatric & Substance Abuse) Hospitals—RL, W ✓ Nursing Care Facilities—W ✓ Residential Mental Retardation, Mental Health & Substance Abuse Facilities—W ✓ Community Care Facilities for the Elderly—W ✓ Other Residential Care Facilities—W	✓ Couriers & Express Delivery Services—W, BA ✓ Data Processing, Hosting; & Related Services—BA ✓ Monetary Authorities-Central Bank—RL, EM, W ✓ Depository Credit Intermediation—RL, EM, W ✓ Non-depository Credit Intermediation—W ✓ Activities Related to Credit Intermediation—W ✓ Securities & Commodity Contracts Intermediation & Brokerage—RL, EM ✓ Other Financial Investment Activities—RL, EM ✓ Insurance Carriers—RL, W ✓ Agencies, Brokerages, & Other Insurance Related Activities—RL ✓ Other Investment Pools & Funds—RL, EM ✓ Lessors of Real Estate—RL, OM ✓ Offices of Real Estate Agents & Brokers—RL, OM ✓ Activities Related to Real Estate—RL, OM ✓ Legal Services—OM ✓ Accounting, Tax Preparation, Bookkeeping, & Payroll Services—RL, OM, BA ✓ Specialized Design Services—BA ✓ Computer Systems Design & Related Services—EM, OM, W, BA ✓ Advertising, Public Relations, & Related Services—RL, OM, W ✓ Management of Companies & Enterprises—OM, BA ✓ Office Administrative Services ✓ Facilities Support Services—BA ✓ Employment Services—RL, OM ✓ Business Support Services—OM ✓ Investigation & Security Services ✓ Services to Buildings & Dwellings—RL, OM ✓ Other Support Services—W ✓ Waste Collection—RL, EM, W

Arts, Entertainment, Recreation & Visitor Services (8,307 jobs)	
✓ Scenic & Sightseeing Transportation—W, BA ✓ Motion Picture & Video Industries—OM, BA ✓ Radio & Television Broadcasting—EM, W ✓ Travel Arrangement & Reservation Services ✓ Performing Arts Companies—BA ✓ Spectator Sports ✓ Promoters of Performing Arts, Sports, & Similar Events ✓ Agents & Managers for Artists, Athletes, Entertainers, & Other Public Figures ✓ Independent Artists, Writers, & Performers ✓ Museums, Historical Sites, & Similar Institutions—BA ✓ Amusement Parks & Arcades—BA ✓ Gambling Industries—BA ✓ Other Amusement & Recreation Industries—BA ✓ Traveler Accommodation—BA ✓ RV (recreational vehicle) Parks & Recreational Camps—BA ✓ Rooming & Boarding Houses—BA ✓ Special Food Services ✓ Drinking Places (alcoholic beverages) ✓ Restaurants & Other Eating Places	
LEGEND: RL = regional linkages ● EM = employment multiplier ●W=above average wages ● OM = occupation match ● BA = base activity	

Center for Strategic Economic Research, November 2014
Data Source: CSER estimates based on Moody's Economy.com; IMPLAN, 2012 Coefficients information; and U.S. Census Bureau, 2010-2012 American Community Survey

The Environmental & Architectural/Engineering Services cluster is the smallest cluster with nearly 1,200 jobs and includes professional consulting and architectural and engineering services activities as well as environmental-related operations like remediation and other waste management services. The components of this cluster offer all the additional assessed benefits including regional linkages, employment multiplier, above average wages, occupation match, and base activities. Examples of existing employers in this cluster include Anova Nexus and Allied Environmental Inc. and possibly a number of proprietor business ventures that fit within this cluster as well—all of which generally demand office and some industrial space.

With more than 1,800 jobs, the Agriculture & Food cluster includes a combination of food manufacturing and wholesaler as well as general agriculture activities. This cluster offers all of the additional analyzed benefits, particularly base activities, and its core activities generally require industrial and some retail space.

The Medical cluster (around 6,500 jobs) is comprised of a mix of health care, social services, and manufacturing activities. In addition to larger medical campuses, most of the core activities in the Medical cluster typically require office or multifamily/institutional residential space. The core Medical cluster activities support all the additional identified benefits. To some extent, this cluster is driven by market size and potential as most of its activities support the local population. Larger existing employers in this cluster include Marshall Medical Center and Barton Healthcare.

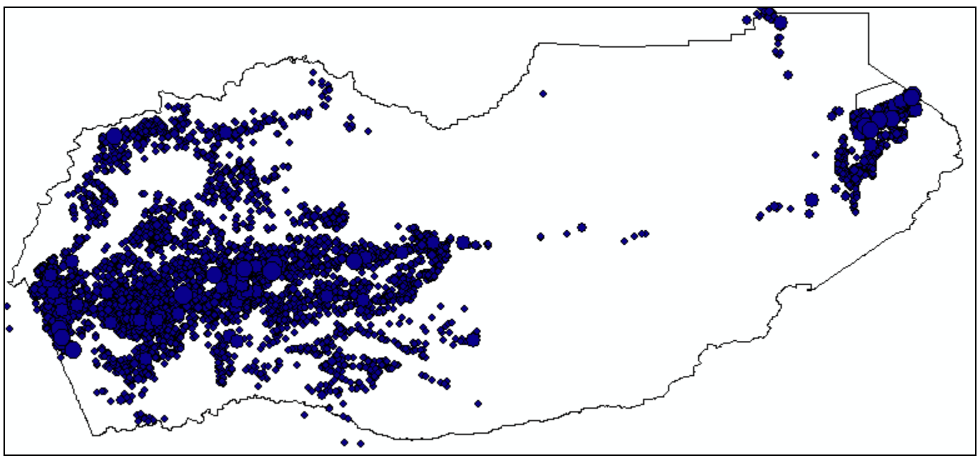
A wide variety of professional, finance, real estate, and support services activities are represented in the 7,800-job Business & Financial Services cluster ranging from legal services and specialized design services to insurance carriers. Almost all of the core activities within this cluster present at least one of the analyzed benefits. Establishments in this cluster tend to utilize office space and a couple existing employers within this cluster include Atwood Insurance and York Risk Service Group Inc.

Many of the Arts, Entertainment, Recreation & Visitor Services cluster's core activities are base activities, but only a few create other benefits such as above average wages or employment multiplier. This is the largest cluster, with around 8,300 jobs, and includes activities such as motion picture & video industries, gambling industries, and traveler accommodation. Examples of companies in this cluster include Camp Richardson and KFOK Community Radio.

Establishment Characteristics

Most of the existing establishments in El Dorado County are concentrated along the Highway 50 corridor in the western portion of the County, as shown in Figure 34. Many of the larger establishments in terms of employment size are in this area with a few others around South Lake Tahoe. Establishments in other parts of the County are primarily small and, as expected, concentrated around residential communities and key transportation corridors.

FIGURE 34
ESTABLISHMENT GEOGRAPHIC DISTRIBUTION

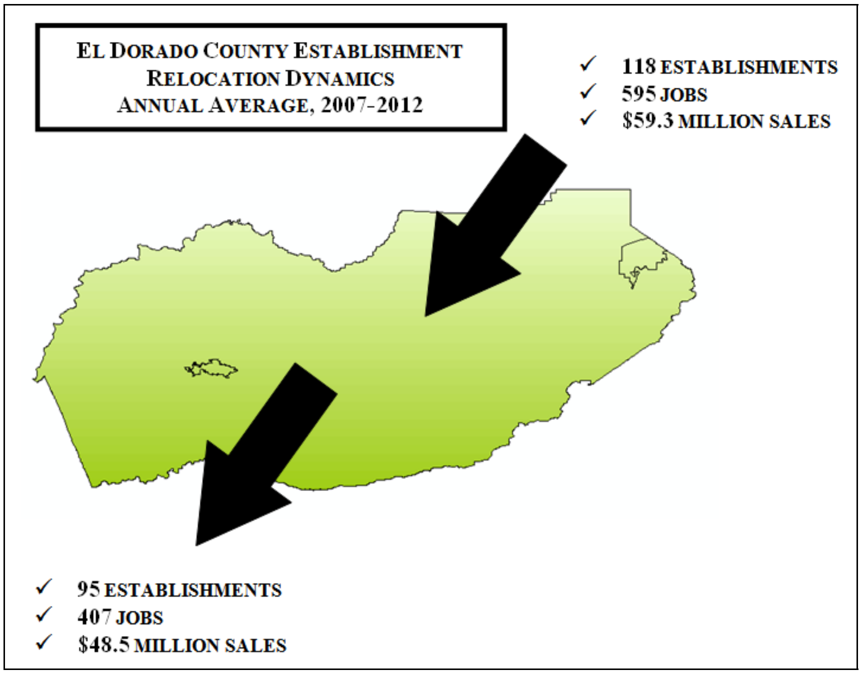


Center for Strategic Economic Research, November 2014
Data Source: National Establishment Time Series database
Note: Relative sizes of the circles are based on 2010 company employment counts.

Figure 35, on the next page, shows that on an annual average basis between 2007 and 2012, nearly 120 companies moved into El Dorado County bringing almost 600 jobs and over $59 million of sales. In this same period, close to 100 companies moved out of the County, taking more the 400 jobs and about $49 million of sales with them. Overall, relocation dynamics in the County reveal that the local economy benefits from a modest net gain of establishments, jobs, and sales. Nevertheless, economic development programs that focus on business retention could help minimize the company exits while building partnerships for business attraction could enhance the level of new company locations.

Over the past five years, a little less than two-thirds of the company exits from the County were related to relocations within California with a notably large share moving to other parts of the Sacramento Region. Several of the intra-Region moves remained along the Highway 50 corridor in communities like Folsom, Rancho Cordova, and Sacramento. Less than 40 percent of the companies moved out of the state with Nevada capturing a large portion of this movement. Over 85 percent of the company movement into the County was from California with the vast majority from other parts of the Sacramento Region. Similar to the company exit dynamics, a significant portion of the movement from the Region was along the Highway 50 Corridor.

FIGURE 35
ESTABLISHMENT RELOCATION DYNAMICS



Center for Strategic Economic Research, November 2014
Data Source: National Establishment Time Series database

The concept of focusing economic development program attention on "gazelle" companies has received a significant amount of consideration due to the fact that these types of companies have been shown to drive a significant amount of new job growth in a local economy. Gazelle companies are those defined as generating annual sales of $500,000 or more with five-year growth of 20 percent or greater. Figure 36 shows that in El Dorado County, there are roughly 120 gazelle companies supporting over 3,100 jobs and close to $431.1 million of annual sales. Eighty-two percent of the identified gazelle companies are small with less than 50 employees. A few of the gazelle companies fall into high-value categories like the Manufacturing and Professional & Business Services industries or are headquarters locations.

FIGURE 36
EL DORADO COUNTY GAZELLE COMPANIES

Type	*Estab.*	*Emp.*	*Sales*
Total	122	3,134	$431,083,474
Small (Under 50 Emp.)	100	1,350	$210,284,856
Manufacturing	11	495	$75,261,918
Professional & Business Svcs.	18	402	$48,224,684
Headquarters	9	344	$59,911,677

Center for Strategic Economic Research, November 2014
Data Source: National Establishment Time Series database

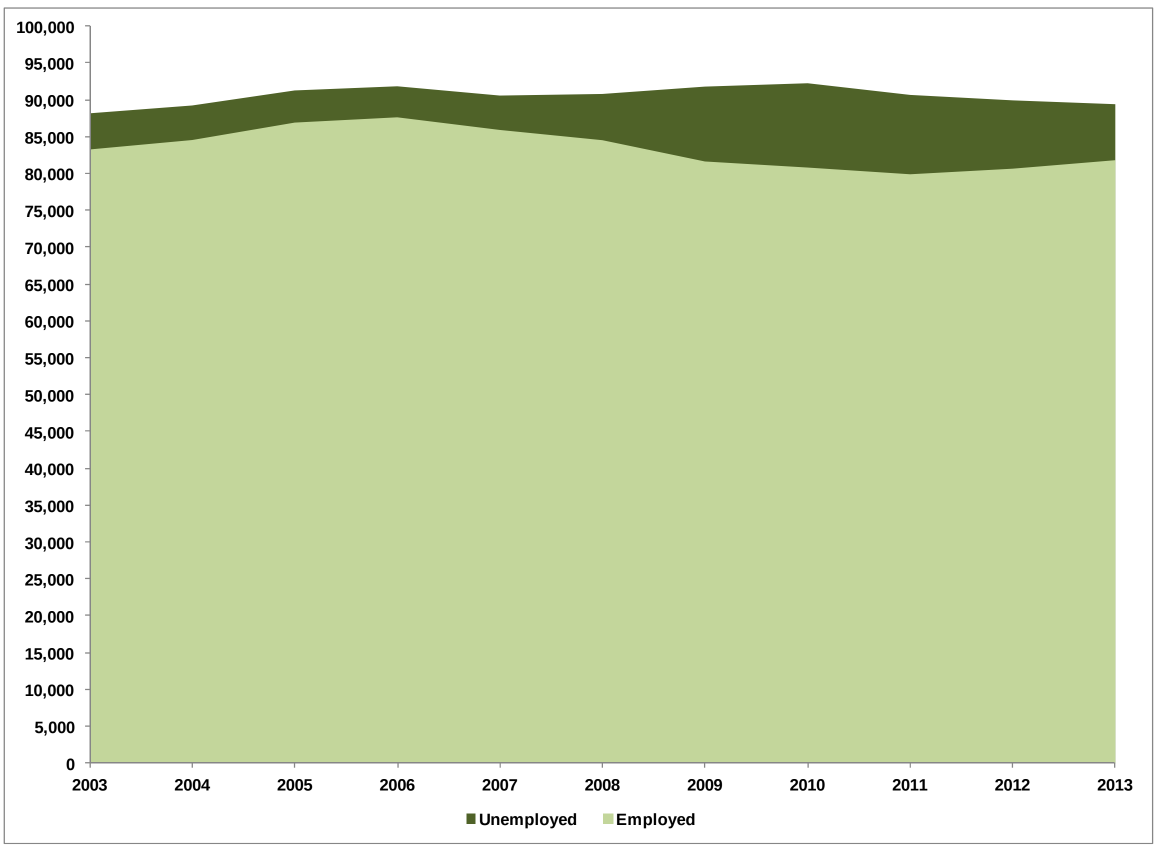
Workforce Analysis

Local economic development efforts can benefit tremendously from knowledge of local workforce dynamics. Resident workforce and commute characteristics plus potential cluster occupational demand are covered in this section.

Resident Workforce Characteristics

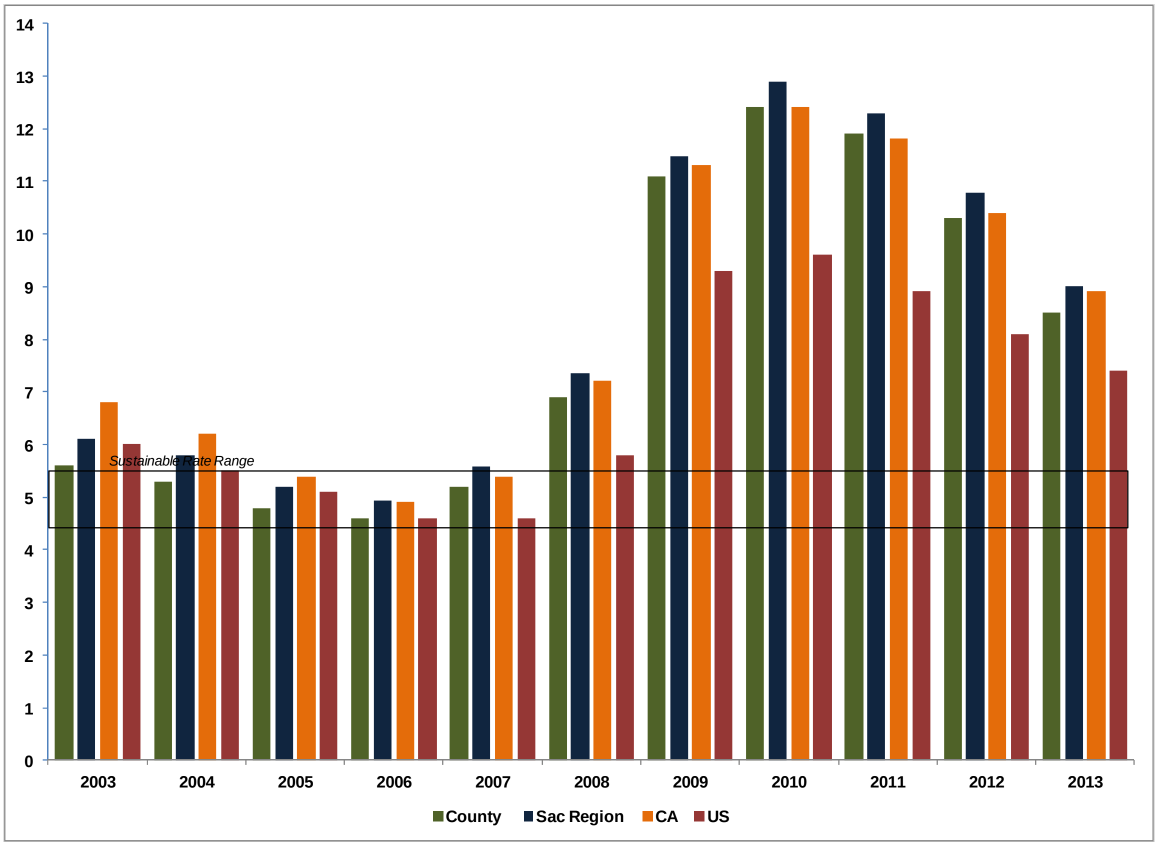
The County's labor force (employable residents) has grown at a slower pace than the broader population. Figure 37 shows that El Dorado County's labor force includes around 89,000 residents, which is about 1,200 larger than 10 years ago. The recent recession has had a significant effect on the number of unemployed residents. In the past 10 years, the County has seen a sizable increase in the unemployment rate elevating above what is typically viewed as a sustainable range (between 4.5 and 5.5 percent), as illustrated in Figure 38, on the next page. Additionally, until the recent recession, the County's unemployment rate consistently tracked close to the national average; however, now it tracks closer to, but is still lower than, the state and Sacramento Region.

FIGURE 37
EL DORADO COUNTY LABOR FORCE



Center for Strategic Economic Research, November 2014
Data Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics

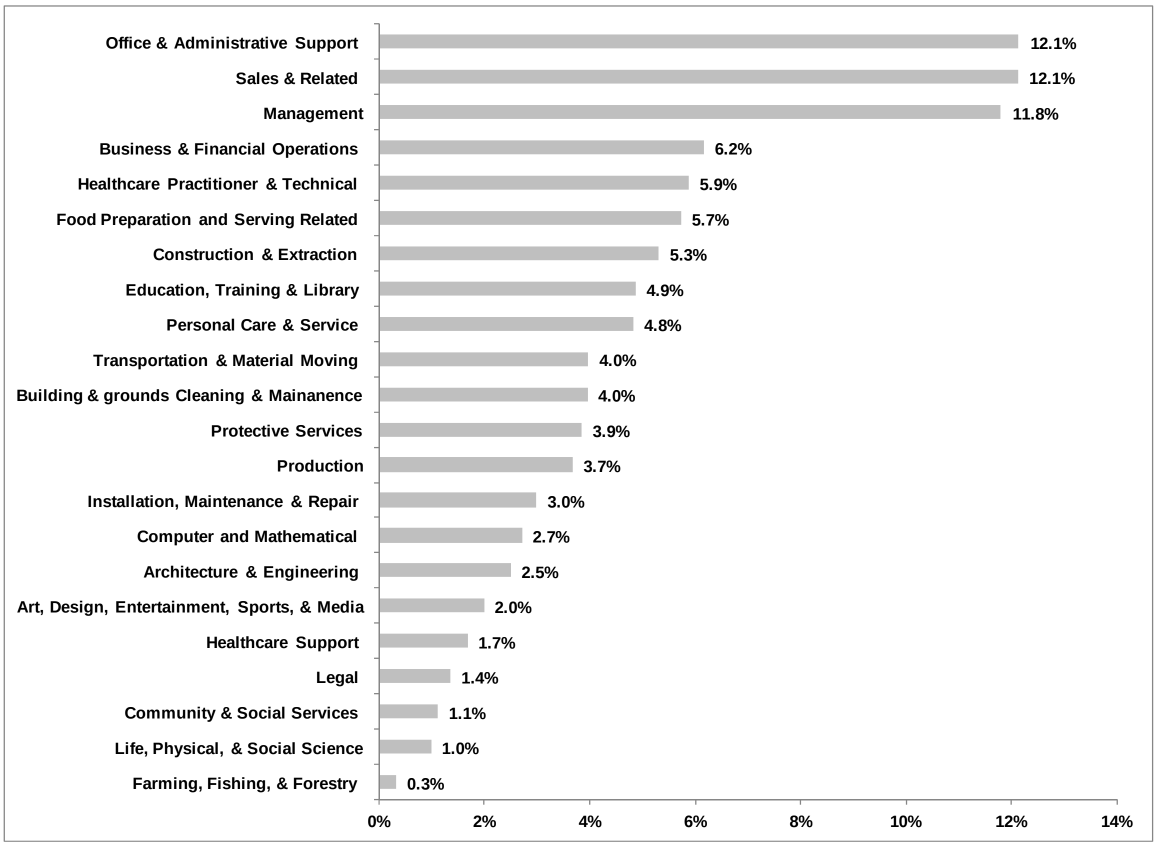
FIGURE 38
UNEMPLOYMENT RATES



Center for Strategic Economic Research, November 2014
Data Sources: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics and Current Population Survey

As shown in Figure 39, about 48 percent of El Dorado County's working residents are employed in occupations classified within five main occupational categories including Office & Administrative Support; Sales & Related; Management; Business & Financial Operations; and Healthcare Practitioner & Technical. With the exception of Management (a group of high-skilled occupations accounting for about 12 percent of the working population), occupations within these larger categories are typically considered low-skilled. This skill mix is not necessarily unusual considering the majority of jobs demanded by all establishments in the broader economy are considered low-skilled. The relative distribution of jobs, however, is a reflection of both the regional and local economies since residents take employment opportunities both inside and outside the County.

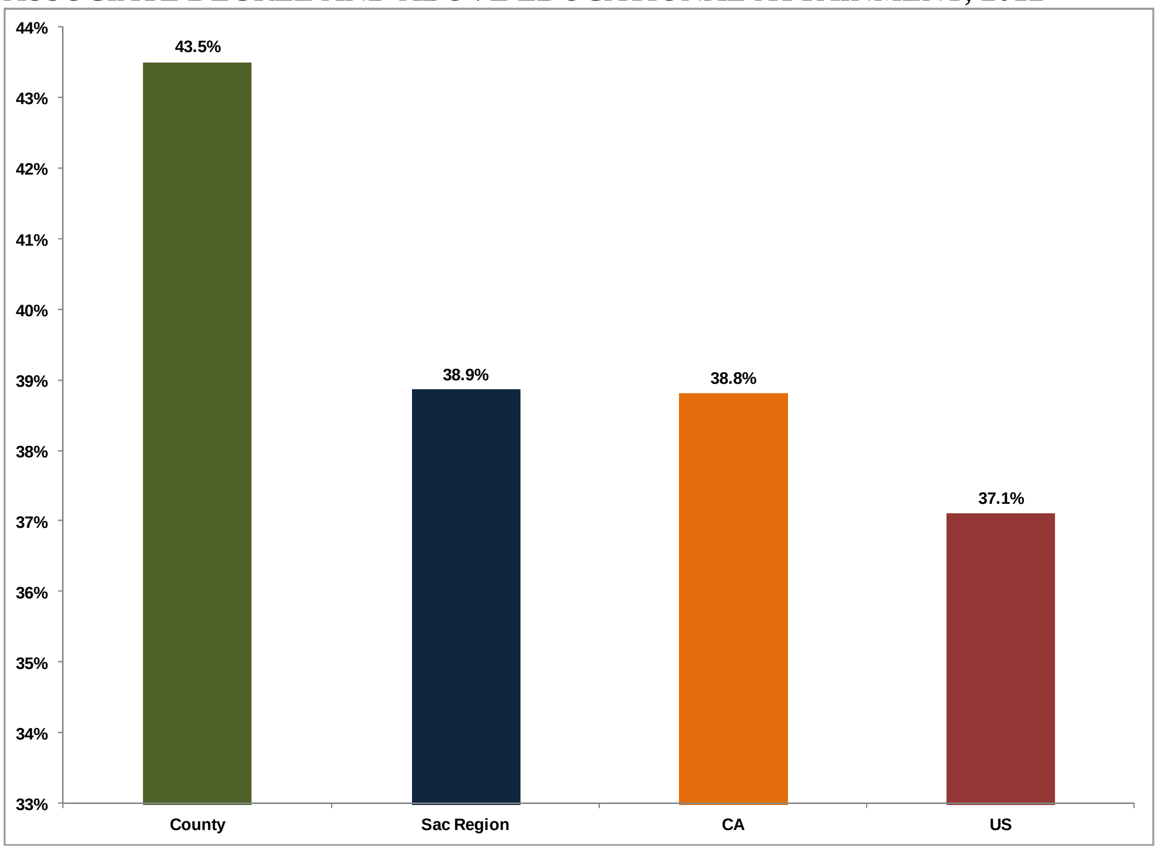
FIGURE 39
EL DORADO COUNTY RESIDENT OCCUPATIONS



Center for Strategic Economic Research, November 2014
Data Source: U.S. Census Bureau, 2010-2013 American Community Survey

Figure 40 shows that the proportion of El Dorado County's population that has attained an Associate Degree or above (almost 44 percent) is much higher than all three benchmarks. Local educational attainment is supported not only by the draw of quality of life and employment opportunities for educated residents, but also by regional and local higher education institutions such as Lake Tahoe Community College and the Folsom Lake College El Dorado Center.

FIGURE 40
ASSOCIATE DEGREE AND ABOVE EDUCATIONAL ATTAINMENT, 2012

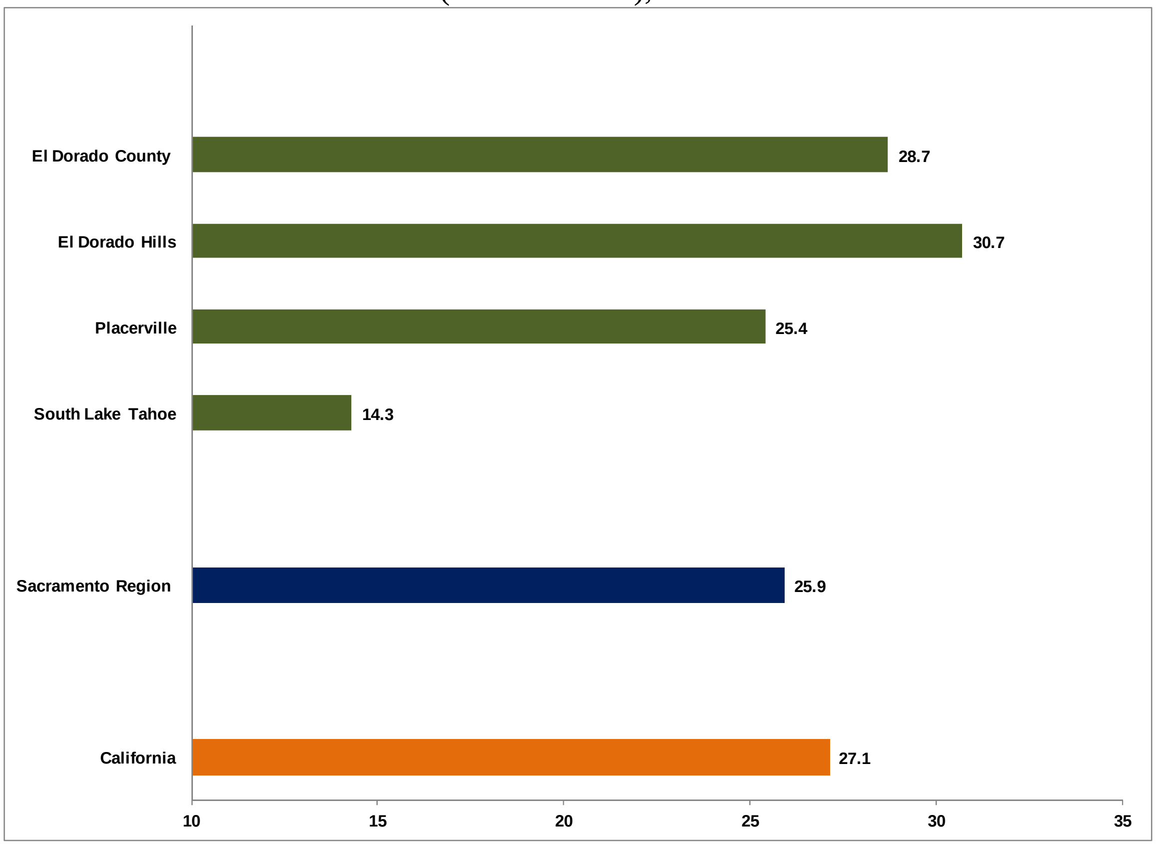


Center for Strategic Economic Research, November 2014
Data Source: U.S. Census Bureau, 2012 American Community Survey

Commute Characteristics

A large portion of the County's population is not being utilized internally and commute to locations outside the County for work, reflected in the County's longer commute times (nearly 29 minutes) relative to the Sacramento Region and California shown in Figure 41.

FIGURE 41
AVERAGE COMMUTE TIMES (IN MINUTES), 2012



Center for Strategic Economic Research, November 2014
Data Source: U.S. Census Bureau, 2008-2012 American Community Survey

Figure 42 shows that the average 2007 through 2011 worker inflow-outflow ratio (replacement rate of in-commuters to out-commuters) of El Dorado County was around 46 percent, demonstrating a rather large outflow of the resident workforce. Most El Dorado County residents commute to Sacramento, Folsom, Rancho Cordova, and Roseville while in-commuters to the County also come from these communities in addition to Citrus Heights.

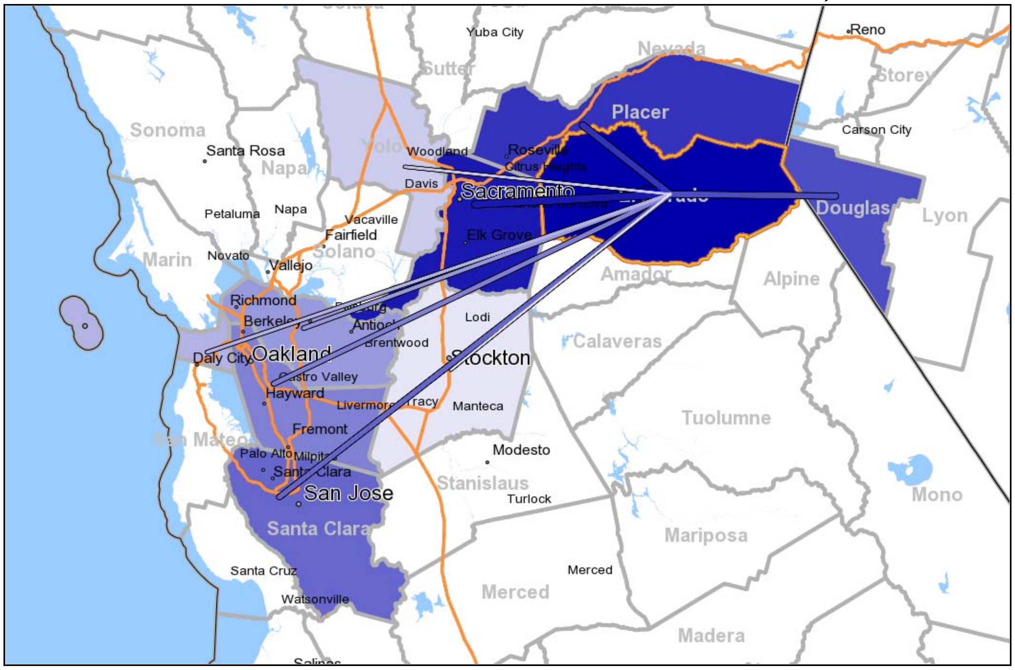
Figures 43 and 44, on the following page, are maps which show which the most prominent out-commute and in-commute patterns.

FIGURE 42
EL DORADO COUNTY COMMUTE PATTERNS

Factor	*El Dorado County*
Worker Inflow-Outflow Ratio	46.4%
Top Out-Commute Counties	Sacramento, Placer, Douglas
Top Out-Commute Cities	Sacramento, Folsom, Rancho Cordova, Roseville
Top In-Commute Counties	Sacramento, Placer, Douglas
Top In-Commute Cities	Folsom, Sacramento, Rancho Cordova, Citrus Heights.

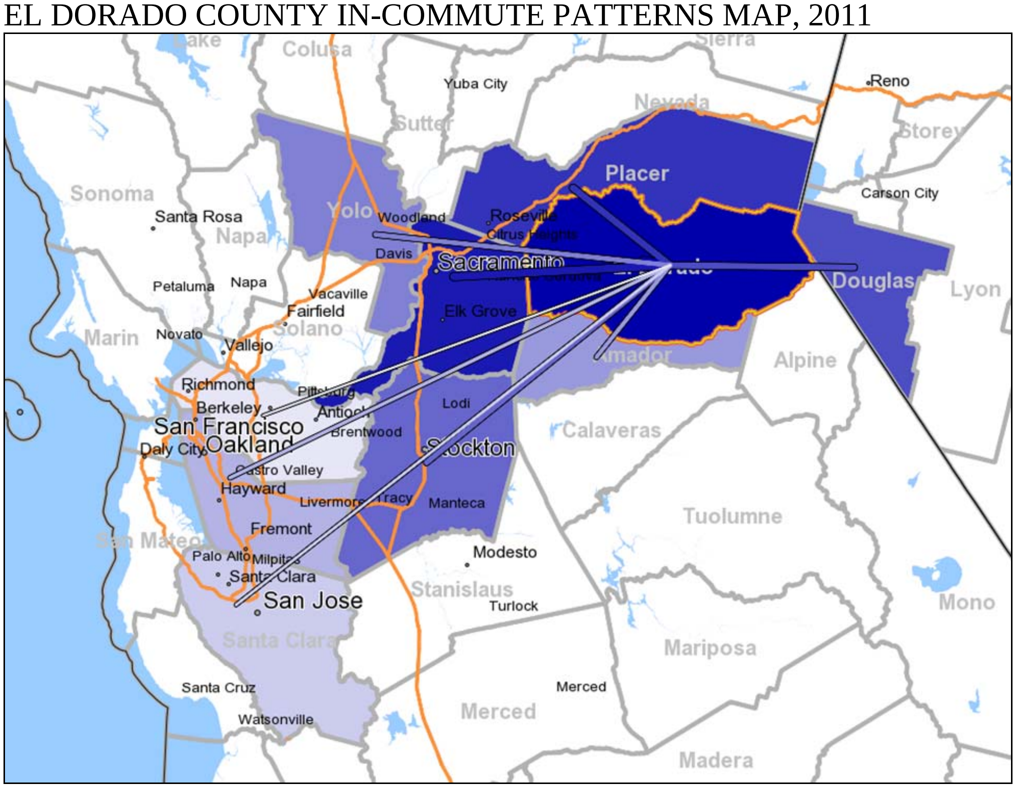
Center for Strategic Economic Research, November 2014
Data Source: U.S. Census Bureau, 2011 Local Employment Dynamics

FIGURE 43
EL DORADO COUNTY OUT-COMMUTE PATTERNS MAP, 2011



Center for Strategic Economic Research, November 2014
Data Source: U.S. Census Bureau, 2011 Local Employment Dynamics

FIGURE 44
EL DORADO COUNTY IN-COMMUTE PATTERNS MAP, 2011



Center for Strategic Economic Research, November 2014
Data Source: U.S. Census Bureau, 2011 Local Employment Dynamics

Cluster Occupational Demand

Figure 45 lists the 10 occupations estimated to capture the greatest share of all jobs within each of the viable clusters. The top 10 occupations make up a notable share of cluster workforce demand, accounting for between about 30 percent and 62 percent of all jobs across the core competencies that are embedded within the clusters. Training levels vary significantly among the viable clusters with the Environmental & Architectural/Engineering Services cluster demonstrating the greatest demand for occupations requiring higher education while the Business & Financial Services and Agriculture & Food clusters represent the lower end of the training level spectrum utilizing mainly on-the-job training occupations. The greening of the economy could also affect several of the predominant occupations in the Agriculture & Food, Business Services, and Environmental & Architectural/Engineering Services clusters either through increased demand, new skill requirements, or job opportunities emerging in new fields. A push has been made in recent years to encourage growth of workforce prepared for higher-wage occupations that are in the STEM disciplines which require knowledge of science, technology, engineering, or mathematics. Four of the top occupations employed in the Environmental & Architectural/Engineering Services cluster are STEM discipline occupations.

FIGURE 45
TOP 10 OCCUPATIONS ASSOCIATED WITH VIABLE CLUSTERS

Cluster/Occupation	*Occupation Code*	*Share of Cluster Occupation*	*Median Hourly Wage*	*Median Annual Earnings*	*Education Level*	*Green Economy*	*STEM Discipline*
Business & Financial Services							
Janitors & Cleaners, Except Maids & Housekeeping Cleaners	37-2011	18.3%	$12.50	$26,006	STOTJT	-	-
Landscaping & Groundskeeping Workers	37-3011	16.7%	$12.74	$26,498	STOTJT	Skill	-
Maids & Housekeeping Cleaners	37-2012	11.4%	$10.24	$21,305	STOTJT	-	-
First-Line Supervisors of Housekeeping & Janitorial Workers	37-1011	3.4%	$16.16	$33,605	Work Exp	-	-
Security Guards	33-9032	2.9%	$11.71	$24,350	STOTJT	-	-
Pest Control Workers	37-2021	2.2%	$14.16	$29,461	MTOTJT	-	-
First-Line Supervisors of Landscaping, Law n Service, & Groundskeeping Workers	37-1012	2.2%	$20.11	$41,830	Work Exp	Demand	-
Office Clerks, General	43-9061	1.8%	$15.90	$33,082	STOTJT	-	-
Laborers & Freight, Stock, & Material Movers, Hand	53-7062	1.7%	$12.16	$25,290	STOTJT	-	-
Customer Service Representatives	43-4051	1.5%	$17.51	$36,419	STOTJT	Demand	-
Environmental & Architectural/Engineering Services							
Management Analysts	13-1111	14.1%	$27.51	$57,217	BA/BS + Exp	-	-
Civil Engineers	17-2051	3.9%	$47.54	$98,883	BA/BS	Skill	Engineering
Architects, Except Landscape & Naval	17-1011	3.4%	$32.65	$67,912	BA/BS	Skill	Engineering
General & Operations Managers	11-1021	2.4%	$43.83	$91,170	BA/BS + Exp	Skill	-
Office Clerks, General	43-9061	2.3%	$15.90	$33,082	STOTJT	-	-
Managers, All Other	11-9199	2.3%	$23.38	$48,628	Work Exp	Emerging	Environmental Science
Sales Representatives, Services, All Other	41-3099	2.3%	$24.68	$51,328	STOTJT	Emerging	-
Hazardous Materials Removal Workers	47-4041	2.1%	$17.24	$35,867	MTOTJT	Skill	-
Business Operations Specialists, All Other	13-1199	2.0%	$31.47	$65,460	LTOTJT	Emerging	Computer Science
Market Research Analysts & Marketing Specialists	13-1161	2.0%	$30.55	$63,545	BA/BS	-	-
Medical							
Registered Nurses	29-1141	8.7%	$51.73	$107,591	BA/BS	-	-
Nursing Assistants	31-1014	2.8%	$14.11	$29,352	PSVE	-	-
Dental Assistants	31-9091	2.7%	$19.13	$39,784	PSVE	-	-
Medical Secretaries	43-6013	2.6%	$17.28	$35,940	MTOTJT	-	-
Medical Secretaries	43-6013	2.6%	$17.28	$35,940	MTOTJT	-	-
Medical Assistants	31-9092	2.6%	$16.88	$35,102	MTOTJT	-	-
Dental Hygienists	29-2021	2.1%	$48.36	$100,597	AA/AS	-	-
Home Health Aides	31-1011	1.9%	$10.73	$22,314	STOTJT	-	-
Personal Care Aides	39-9021	1.8%	$10.62	$22,083	STOTJT	-	-
Maids & Housekeeping Cleaners	37-2012	1.7%	$10.24	$21,305	STOTJT	-	-

FIGURE 45(CONTINUED)
TOP 10 OCCUPATIONS ASSOCIATED WITH VIABLE CLUSTERS

Cluster/Occupation	Occupation Code	Share of Cluster Occupation	Median Hourly Wage	Median Annual Earnings	Education Level	Green Economy	STEM Discipline
Arts, Entertainment, Recreation & Visitor Services							
Combined Food Preparation & Serving Workers, Including Fast Food	35-3021	12.9%	$9.17	$19,069	STOTJT	-	-
Waiters & Waitresses	35-3031	12.5%	$8.97	$18,660	STOTJT	-	-
Cooks, Fast Food	35-2011	7.4%	$8.91	$18,539	STOTJT	-	-
Cooks, Restaurant	35-2014	5.3%	$11.06	$22,995	MTOTJT	-	-
Maids & Housekeeping Cleaners	37-2012	4.8%	$10.24	$21,305	STOTJT	-	-
First-Line Supervisors of Food Preparation & Serving Workers	35-1012	3.3%	$13.48	$28,048	Work Exp	-	Life Sciences
Dishwashers	35-9021	2.7%	$9.13	$18,985	STOTJT	-	-
Food Preparation Workers	35-2021	2.6%	$9.45	$19,652	STOTJT	-	-
Fitness Trainers & Aerobics Instructors	39-9031	2.6%	$21.29	$44,279	PSVE	-	-
Bartenders	35-3011	2.5%	$9.14	$19,005	STOTJT	-	-
Agriculture & Food							
Farmworkers & Laborers, Crop, Nursery, & Greenhouse	45-2092	25.9%	$8.99	$18,698	STOTJT	-	-
Farmers, Ranchers, & Other Agricultural Managers	11-9013	21.5%	$13.53	$28,148	Work Exp	Skill	Life Sciences
Cashiers	41-2011	2.3%	$10.22	$21,267	STOTJT	-	-
Agricultural Equipment Operators	45-2091	2.2%	$10.65	$22,154	STOTJT	-	-
Laborers & Freight, Stock, & Material Movers, Hand	53-7062	1.9%	$12.16	$25,290	STOTJT	Demand	-
Farmworkers, Farm, Ranch, & Aquacultural Animals	45-2093	1.8%	$11.55	$24,017	STOTJT	-	-
Nonfarm Animal Caretakers	39-2021	1.6%	$12.02	$24,994	STOTJT	-	-
First-Line Supervisors of Farming, Fishing, & Forestry Workers	45-1011	1.6%	$21.26	$44,230	Work Exp	Demand	Life Sciences
Heavy & Tractor-Trailer Truck Drivers	53-3032	1.5%	$17.06	$35,485	STOTJT	Skill	-
Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	41-4012	1.5%	$24.60	$51,177	MTOTJT	Skill	-

Center for Strategic Economic Research, November 2014
Data Source: CSER analysis of Moody's Analytics, CareerGPS.com, and Occupational Information Network information

Research Methodology

The data, analysis, and figures presented throughout this report were developed using the cited sources. CSER created internal estimates and detailed analysis for several of the quantitative components in this study. A description of the methodology employed in producing these components is provided in this section.

El Dorado County and California employment estimates were created using a database of annual employment at the four-digit North American Industrial Classification System (NAICS) code hierarchy from Moody's Economy.com. The Moody's Economy.com data includes annual historical employment from 1970 as well as projections through 2039. The historical data are created using official government-provided estimates of employment by industry. Moody's Economy.com projections are developed using a proprietary econometric model and are highly-regarded by researchers throughout the country, including CSER. The Sacramento Region and United States data were pulled directly from California Employment Development Department Employment by Industry Data and the United States Bureau of Labor Statistics Current Employment Statistics with minimal adjustments made to create greater industry detail than was reported in the Trade, Transportation, & Utilities and Educational & Health Services sectors based on the United States Bureau of Labor Statistics Quarterly Census of Employment & Wages. For the major sector analysis, all four-digit NAICS datasets were aggregated to the two-digit level. It is important to note that the forecasts presented are simply to provide context for economic development efforts in El Dorado County and are not meant to incorporate judgments about the likelihood of the forecast results or embedded assumptions.

The split of base and local-serving activities was created using a three-step process. First, CSER identified export-oriented sectors in El Dorado County using regional sales coefficient data from IMPLAN (2012 Coefficient series). Sectors where less than 90 percent of the value of goods and services produced was absorbed locally (i.e. more than 10 percent of production was exported domestically and internationally) were identified. Second, CSER determined whether those identified sectors were typically considered base within the Sacramento Region according to the California Regional Economies Project 2004 Greater Sacramento Region Economic Base Report. In cases where the sectors did not meet this screen, additional analysis was performed to determine whether unique attributes exist within the County to classify the activity as base. Third, the base activities were matched to four-digit NAICS employment data for El Dorado County. This information was then aggregated back to the two-digit NAICS level, reflecting the split between base and local-serving employment for major sectors in the County. The table on the following pages shows the specific activities defined as base within each of the major sectors.

NAICS	Major Sector/Base Activity
11	**Agriculture, Forestry, Fishing, and Hunting**
11	Agriculture
21	**Mining**
2111	Oil and gas extraction
2121	Coal mining
2122	Metal ore mining
2123	Nonmetallic mineral mining and quarrying
31-33	**Manufacturing**
3111	Animal food manufacturing
3112	Grain and oilseed milling
3113	Sugar and confectionery product manufacturing
3114	Fruit and vegetable preserving and specialty food manufacturing
3115	Dairy product manufacturing
3116	Animal slaughtering and processing
3117	Seafood product preparation and packaging
3118	Bakeries and tortilla manufacturing
3119	Other food manufacturing
3121	Beverage manufacturing
3122	Tobacco manufacturing
3131	Fiber; yarn; and thread mills
3132	Fabric mills
3133	Textile and fabric finishing and fabric coating mills
3141	Textile furnishings mills
3149	Other textile product mills
3151	Apparel knitting mills
3152	Cut and sew apparel manufacturing
3159	Apparel accessories and other apparel manufacturing
3161	Leather and hide tanning and finishing
3162	Footwear manufacturing
3169	Other leather and allied product manufacturing
3211	Sawmills and wood preservation
3212	Veneer; plywood; and engineered wood product manufacturing
3219	Other wood product manufacturing
3221	Pulp; paper; and paperboard mills
3222	Converted paper product manufacturing
3231	Printing and related support activities
3241	Petroleum and coal products manufacturing
3251	Basic chemical manufacturing
3252	Resin; synthetic rubber; and artificial synthetic fibers and filaments manufacturing
3253	Pesticide; fertilizer; and other agricultural chemical manufacturing
3254	Pharmaceutical and medicine manufacturing
3255	Paint; coating; and adhesive manufacturing
3256	Soap; cleaning compound; and toilet preparation manufacturing
3259	Other chemical product and preparation manufacturing
3261	Plastics product manufacturing
3262	Rubber product manufacturing
3271	Clay product and refractory manufacturing
3272	Glass and glass product manufacturing
3273	Cement and concrete product manufacturing
3274	Lime and gypsum product manufacturing
3279	Other nonmetallic mineral product manufacturing
3311	Iron and steel mills and ferroalloy manufacturing
3312	Steel product manufacturing from purchased steel
3313	Alumina and aluminum production and processing
3314	Nonferrous metal (except aluminum) production and processing
3315	Foundries
3321	Forging and stamping

NAICS	Major Sector/Base Activity
3322	Cutlery and handtool manufacturing
3323	Architectural and structural metals manufacturing
3324	Boiler; tank; and shipping container manufacturing
3325	Hardware manufacturing
3326	Spring and wire product manufacturing
3327	Machine shops; turned product; and screw; nut; and bolt manufacturing
3328	Coating; engraving; heat treating; and allied activities
3329	Other fabricated metal product manufacturing
3331	Agriculture; construction; and mining machinery manufacturing
3332	Industrial machinery manufacturing
3333	Commercial and service industry machinery manufacturing
3334	Ventilation; heating; air-conditioning; and commercial refrigeration equipment manufacturing
3335	Metalworking machinery manufacturing
3336	Engine; turbine; and power transmission equipment manufacturing
3339	Other general purpose machinery manufacturing
3341	Computer and peripheral equipment manufacturing
3342	Communications equipment manufacturing
3343	Audio and video equipment manufacturing
3344	Semiconductor and other electronic component manufacturing
3345	Navigational; measuring; electromedical; and control instruments manufacturing
3346	Manufacturing and reproducing magnetic and optical media
3351	Electric lighting equipment manufacturing
3352	Household appliance manufacturing
3353	Electrical equipment manufacturing
3359	Other electrical equipment and component manufacturing
3361	Motor vehicle manufacturing
3362	Motor vehicle body and trailer manufacturing
3363	Motor vehicle parts manufacturing
3364	Aerospace product and parts manufacturing
3365	Railroad rolling stock manufacturing
3366	Ship and boat building
3369	Other transportation equipment manufacturing
3371	Household and institutional furniture and kitchen cabinet manufacturing
3372	Office furniture (including fixtures) manufacturing
3379	Other furniture related product manufacturing
3391	Medical equipment and supplies manufacturing
3399	Other miscellaneous manufacturing
42	**Wholesale Trade**
4231	Motor vehicle and motor vehicle parts and supplies merchant wholesalers
4232	Furniture and home furnishing merchant wholesalers
4233	Lumber and other construction materials merchant wholesalers
4234	Professional and commercial equipment and supplies merchant wholesalers
4235	Metal and mineral (except petroleum) merchant wholesalers
4236	Electrical and electronic goods merchant wholesalers
4237	Hardware; and plumbing and heating equipment and supplies merchant wholesalers
4238	Machinery; equipment; and supplies merchant wholesalers
4239	Miscellaneous durable goods merchant wholesalers
4241	Paper and paper product merchant wholesalers
4242	Drugs and druggists' sundries merchant wholesalers
4243	Apparel; piece goods; and notions merchant wholesalers
4244	Grocery and related product merchant wholesalers
4245	Farm product raw material merchant wholesalers
4246	Chemical and allied products merchant wholesalers
4247	Petroleum and petroleum products merchant wholesalers
4248	Beer; wine; and distilled alcoholic beverage merchant wholesalers
4249	Miscellaneous nondurable goods merchant wholesalers
4251	Wholesale electronic markets and agents and brokers

NAICS	Major Sector/Base Activity
48-49	**Transportation and Warehousing**
4811	Scheduled air transportation
4812	Nonscheduled air transportation
4821	Rail transportation
4831	Deep sea; coastal; and great lakes water transportation
4832	Inland water transportation
4841	General freight trucking
4842	Specialized freight trucking
4851	Urban transit systems
4852	Interurban and rural bus transportation
4853	Taxi and limousine service
4854	School and employee bus transportation
4855	Charter bus industry
4859	Other transit and ground passenger transportation
4860	Pipeline transportation
4870	Scenic and sightseeing transportation
4881	Support activities for air transportation
4882	Support activities for rail transportation
4883	Support activities for water transportation
4884	Support activities for road transportation
4885	Freight transportation arrangement
4889	Other support activities for transportation
4921	Couriers and express delivery services
4922	Local messengers and local delivery
51	**Information**
5112	Software publishers
5121	Motion picture and video industries
5122	Sound recording industries
5152	Cable and other subscription programming
5182	Data processing; hosting; and related services
5191	Other information services
53	**Real Estate and Rental and Leasing**
5321	Automotive equipment rental and leasing
5324	Commercial and industrial machinery and equipment rental and leasing
5331	Lessors of nonfinancial intangible assets (except copyrighted works)
54	**Professional, Scientific, and Technical Services**
5412	Accounting; tax preparation; bookkeeping; and payroll services
5414	Specialized design services
5415	Computer systems design and related services
5416	Management; scientific; and technical consulting services
5417	Scientific research and development services
5419	Other professional; scientific; and technical services
55	**Management of Companies and Enterprises**
5511	Management of companies and enterprises
56	**Administrative & Waste Services**
5612	Facilities support services
71	**Arts, Entertainment, and Recreation**
7111	Performing arts companies
7121	Museums; historical sites; and similar institutions
7131	Amusement parks and arcades
7132	Gambling industries
7139	Other amusement and recreation industries

NAICS	Major Sector/Base Activity
72	**Accommodation and Food Services**
7211	Traveler accommodation
7212	RV (recreational vehicle) parks and recreational camps
7213	Rooming and boarding houses
92	**Government**
	Federal government
	State government

The primary driver of the cluster selection process was based on an index of economic performance. The index measured 281 detailed economic activities (4-digit NAICS) in El Dorado County across 12 economic factors that measure historical and projected performance:

1. Share of total employment, 2013
2. Shift in share of total employment, 2008-2013
3. Employment specialization (regional share of total employment/statewide share of total employment), 2013
4. Change in employment specialization, 2008-2013
5. Employment growth rate, 2008-2013
6. Projected employment growth rate, 2013-2018
7. Share of total output (market value of goods and services), 2013
8. Shift in share of total output, 2008-2013
9. Output specialization, 2013
10. Change in output specialization, 2008-2013
11. Output growth rate, 2008-2013
12. Projected output growth rate, 2013-2018

Activities within the top two quartiles of economic performance were examined for potential cluster groupings based on similarity of activities and professional experience. The grouping of activities into clusters was also guided by data and definitions from other published cluster work at the national level, including the Cluster Mapping Project and Innovation in American Regions Project, both of which were developed through an Economic Development Administration partnership with Purdue and Harvard Universities. At this point in the process applicable activities in the two lower quartiles of the index were pulled into the cluster groupings based on common definitions.

The groupings of clusters were presented to local leaders for feedback. Five other factors were also analyzed within each cluster to demonstrate further opportunities and benefits as well as help screen for viable activities:

1. Regional Linkages—reflects sectors that use goods and services from the largest sectors in El Dorado County as inputs (forward linkages) or acts as suppliers of goods and services to the largest sectors in El Dorado County (backward linkages). This factor relied on regional use data for forward linkages and social accounts matrix industry by industry information for backward linkages, both

from IMPLAN (2012 Coefficient series). The top two forward linkage and top two backward linkage sectors were identified based on value of goods and services for each of the ten largest sectors in El Dorado County based on employment. The core cluster activities were then matched to this list of 40 regional linkage sectors.

2. Employment Multiplier—demonstrates the ripple effect created by direct, indirect (linked suppliers of goods and services), and induced (employee spending) employment within specific sectors. This factor utilized the employment multiplier information from IMPLAN (2012 Coefficient series). The top 40 employment multiplier sectors in El Dorado County were identified and matched to the list of core cluster activities.
3. Above Average Compensation Activities—reflects those cluster activities which support average compensation (salaries/wages plus benefits) per employee levels above the all industry average in El Dorado County. Compensation data was pulled from the 2012 El Dorado County IMPLAN model.
4. Occupational Match—determines specific sectors that heavily utilized occupations currently held by El Dorado County residents. The top 20 detailed occupations in El Dorado County were identified through U.S. Census Bureau 2010-2012 American Community Survey data. Then the two sectors with the greatest level of employment in these occupations were selected based on the California Employment Development Department's statewide industry-occupation matrix (2010-2020 update). The core cluster activities were compared to the resulting 40 sectors with occupational matches.
5. Economic Base Activities—illustrates if the cluster activities can be considered part of the county's economic base (export-oriented, net wealth generating) according to the base analysis completed in this study.

The table on the following pages summarizes the potential viable clusters and core activities including the five factors described above. It is important to note that the cluster potential reflects only those core activities presented, not necessarily a fully-integrated cluster.

Potential Cluster/Activities	2013 Employment	Regional Linkages	Employment Multiplier	Occupational Match	Above Average Wages	Base	NAICS
Environmental & Architectural/Engineering Services	***1,168***						
Architectural and structural metals manufacturing	29	No	No	No	Yes	Yes	3323
Architectural; engineering; and related services	343	Yes	No	Yes	No	No	5413
Management; scientific; and technical consulting services	487	No	No	Yes	No	Yes	5416
Scientific research and development services	99	No	Yes	Yes	Yes	Yes	5417
Waste treatment and disposal	80	Yes	Yes	No	Yes	No	5622
Remediation and other w aste management services	129	Yes	Yes	No	Yes	No	5629
Agriculture & Food	***1,835***						
Agriculture	1,381	No	No	No	No	Yes	11
Animal food manufacturing	1	No	No	No	No	Yes	3111
Grain and oilseed milling	0	No	No	No	No	Yes	3112
Sugar and confectionery product manufacturing	1	No	No	No	No	Yes	3113
Fruit and vegetable preserving and specialty food manufacturing	8	No	Yes	No	Yes	Yes	3114
Dairy product manufacturing	2	No	No	No	No	Yes	3115
Bakeries and tortilla manufacturing	13	No	No	No	Yes	Yes	3118
Other food manufacturing	10	No	No	No	No	Yes	3119
Beverage manufacturing	199	No	Yes	No	Yes	Yes	3121
Pesticide; fertilizer; and other agricultural chemical manufacturing	0	No	No	No	No	Yes	3253
Agriculture; construction; and mining machinery manufacturing	9	No	No	No	No	Yes	3331
Grocery and related product merchant w holesalers	71	Yes	No	Yes	Yes	Yes	4244
Farm product raw material merchant w holesalers	0	Yes	No	No	Yes	Yes	4245
Beer; w ine; and distilled alcoholic beverage merchant w holesalers	7	Yes	No	No	Yes	Yes	4248
Specialty food stores	109	No	No	No	Yes	No	4452
Beer; w ine; and liquor stores	23	No	No	No	Yes	No	4453
Arts, Entertainment, Recreation & Visitor Services	***8,307***						
Scenic and sightseeing transportation	20	No	No	No	Yes	Yes	4870
Motion picture and video industries	102	No	No	Yes	No	Yes	5121
Radio and television broadcasting	24	No	Yes	No	Yes	No	5151
Travel arrangement and reservation services	68	No	No	No	No	No	5615
Performing arts companies	12	No	No	No	No	Yes	7111
Spectator sports	19	No	No	No	No	No	7112
Promoters of performing arts; sports; and similar events	10	No	No	No	No	No	7113
Agents and managers for artists; athletes; entertainers; and other public figures	1	No	No	No	No	No	7114
Independent artists; w riters; and performers	7	No	No	No	No	No	7115
Museums; historical sites; and similar institutions	16	No	No	No	No	Yes	7121
Amusement parks and arcades	43	No	No	No	No	Yes	7131
Gambling industries	43	No	No	No	No	Yes	7132
Other amusement and recreation industries	1,898	No	No	No	No	Yes	7139
Traveler accommodation	1,265	No	No	No	No	Yes	7211
Rv (recreational vehicle) parks and recreational camps	174	No	No	No	No	Yes	7212
Rooming and boarding houses	7	No	No	No	No	Yes	7213
Special food services	62	No	No	No	No	No	7223
Drinking places (alcoholic beverages)	103	No	No	No	No	No	7224
Restaurants and other eating places	4,432	No	No	No	No	No	7225
Medical	***6,487***						
Pharmaceutical and medicine manufacturing	22	No	Yes	No	Yes	Yes	3254
Navigational; measuring; electromedical; and control instruments manufacturing	80	No	No	No	Yes	Yes	3345
Medical equipment and supplies manufacturing	151	No	Yes	No	Yes	Yes	3391
Drugs and druggists' sundries merchant w holesalers	8	Yes	No	No	Yes	Yes	4242
Health and personal care stores	369	No	No	Yes	Yes	No	4461
Other professional; scientific; and technical services	284	Yes	No	No	No	Yes	5419
Offices of physicians	678	No	No	Yes	Yes	No	6211
Offices of dentists	681	No	No	No	Yes	No	6212
Offices of other health practitioners	354	No	No	No	Yes	No	6213
Outpatient care centers	129	Yes	No	Yes	Yes	No	6214
Medical and diagnostic laboratories	10	Yes	No	No	Yes	No	6215
Home health care services	470	No	No	No	No	No	6216
Other ambulatory health care services	20	Yes	No	No	Yes	No	6219
General medical and surgical hospitals	2,024	Yes	No	Yes	Yes	No	6221

Potential Cluster/Activities	2013 Employment	Regional Linkages	Employment Multiplier	Occupational Match	Above Average Wages	Base	NAICS
Medical (continued)							
Psychiatric and substance abuse hospitals	22	Yes	No	No	Yes	No	6222
Specialty (except psychiatric and substance abuse) hospitals	63	Yes	No	No	Yes	No	6223
Nursing care facilities	265	No	No	No	Yes	No	6231
Residential mental retardation; mental health and substance abuse facilities	211	No	No	No	Yes	No	6232
Community care facilities for the elderly	524	No	No	No	Yes	No	6233
Other residential care facilities	124	No	No	No	Yes	No	6239
Business & Financial Services	7,834						
Couriers and express delivery services	291	No	No	No	Yes	Yes	4921
Data processing; hosting; and related services	52	No	No	No	No	Yes	5182
Monetary authorities-central bank	16	Yes	Yes	No	Yes	No	5211
Depository credit intermediation	510	Yes	Yes	No	Yes	No	5221
Nondepository credit intermediation	77	No	No	No	Yes	No	5222
Activities related to credit intermediation	48	No	No	No	Yes	No	5223
Securities and commodity contracts intermediation and brokerage	50	Yes	Yes	No	No	No	5231
Other financial investment activities	93	Yes	Yes	No	No	No	5239
Insurance carriers	2,087	Yes	No	No	Yes	No	5241
Agencies; brokerages; and other insurance related activities	242	Yes	No	No	No	No	5242
Other investment pools and funds	23	Yes	Yes	No	No	No	5259
Lessors of real estate	204	Yes	No	Yes	No	No	5311
Offices of real estate agents and brokers	145	Yes	No	Yes	No	No	5312
Activities related to real estate	220	Yes	No	Yes	No	No	5313
Legal services	131	No	No	Yes	No	No	5411
Accounting; tax preparation; bookkeeping; and payroll services	939	Yes	No	Yes	No	Yes	5412
Specialized design services	23	No	No	No	No	Yes	5414
Computer systems design and related services	366	No	Yes	Yes	Yes	Yes	5415
Advertising; public relations; and related services	41	Yes	No	Yes	Yes	No	5418
Management of companies and enterprises	122	No	No	Yes	No	Yes	5511
Office administrative services	472	No	No	No	No	No	5611
Facilities support services	122	No	No	No	No	Yes	5612
Employment services	232	Yes	No	Yes	No	No	5613
Business support services	485	No	No	Yes	No	No	5614
Investigation and security services	49	No	No	No	No	No	5616
Services to buildings and dw ellings	609	Yes	No	Yes	No	No	5617
Other support services	28	No	No	No	Yes	No	5619
Waste collection	161	Yes	Yes	No	Yes	No	5621

The translation of sub-sector to occupational employment and related training levels was generated through the industry sector occupation information provided by CareerGPS.com, a website sponsored by the Sacramento Employment & Training Agency (SETA). The 2014 proportions of specific subsector occupation to total subsector employment was applied to the El Dorado County 2013 employment values, with the assumption that the occupational demand within sub sectors in the County's economy follow the regional average and that the proportions have not shifted significantly between 2013 and 2014. The resulting occupational employment was aggregated across the sub-sectors.

The staffing patterns data also assigns one of 11 generally required training levels to each occupation. While there are many ways to enter an occupation, this system reflects the manner in which most workers become fully qualified or proficient in that occupation and the preferences of most employers. This analysis also assumes that occupations in El Dorado County maintain the same typically-required training levels as the regional average. The Bureau of Labor Statistics' definitions for each of the 11 training levels are presented below:

1. **First Professional Degree—**occupations that require at least two years of full-time academic study beyond a bachelor's degree (for example, law, medicine, dentistry, and clergy).
2. **Doctoral Degree (PhD)—**occupations that require at least three years of full-time academic study beyond a bachelor's degree culminating in a doctoral degree.
3. **Master's Degree (MA/MS)—**occupations that require the completion of a master's degree program which is usually one to two years beyond a bachelor's degree.
4. **Bachelor's Degree (BA/BS) or Higher and Some Work Experience—**occupations that generally require work experience in an occupation requiring a bachelor's or higher degree. Most occupations in this category are managerial occupations that require work experience in a related non-managerial occupation.
5. **Bachelor's Degree (BA/BS)—**occupations that require the completion of at least four but not more than five years of full-time academic study beyond high school resulting in a bachelor's degree.
6. **Associate Degree (AA/AS)—**occupations that require the completion of at least two years of full-time academic study beyond high school.
7. **Post-Secondary Vocational Education (PSVE)—**occupations that require completion of vocational school training.
8. **Work Experience—**occupations that require skills obtained through work experience in a related occupation.
9. **Long-Term On-the-Job-Training (LTOJT)—**occupations that require more than 12 months of on-the-job training or combined work experience and formal classroom instruction for workers to develop the skills needed for average job performance.
10. **Moderate-Term On-the-Job-Training (MTOJT)—**occupations in which workers can develop average job performance after 1 to 12 months of combined on-the-job experience and informal training.
11. **Short-Term On-the-Job-Training (STOJT)—**occupations in which workers can develop skills needed after a short demonstration or up to one month of on-the-job experience and instruction.

To assess further opportunities in the predominant cluster-specific occupations, CSER utilized the Occupational Information Network (commonly known as O*Net) database to identify green occupations. O*Net's analysis of the greening of the economy identified three types of changes across specific occupations:

1. **Demand—**the impact of green economy activities and technologies creates an increase in the employment demand for an existing occupation; however, this impact does not entail significant changes in the work and worker requirements of the occupation.
2. **Skills—**the impact of green economy activities and technologies results in a significant change to the work and worker requirements of an existing occupation

with the essential purposes of the occupation remaining the same, but tasks, skills, knowledge, and external elements, such as credentials, have been altered.

3. **Emerging—**the impact of green economy activities and technologies is sufficient to create the need for unique work and worker requirements, which results in the generation of a new occupation.