SCAG Economic Conference Preparation Report
Inland Empire

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Prepared by

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For the Inland Empire, a review of the most recent economic data and the overall trend since the turnaround began in 2011 continues to provide very good news. Based upon growth through September of 2016, the area has surpassed its pre-recession high by 96,798 jobs or 7.4%. This occurred because job growth has surged of late, up 55,958 (*4.5%*) in 2014, 58,692 (*4.5%*) in 2015 and is on track to grow 40,739 (*3.0%*) in 2016 based upon 9-months of preliminary data. If 2016 holds, the area will have created 237,448 jobs in the 2011-2016 period. This will surpass the 140,650 jobs lost from 2008-2010 by 96,798 positions or 69.8%. Looking to 2017, there is every reason to anticipate growth levels similar to those of the 2016 given the forces impacting the key sectors that make up the inland region's economic base (*logistics, construction, health care and manufacturing*).

Unemployment in the inland area has dropped. It was 6.2% in September 2016, down from 6.3% in September 2015. That was well below September's record of 13.7% in 2009 and 2010. Unfortunately, it was the highest among the 50 major U.S. metropolitan areas and above the unadjusted rates for California (*5.3%*) and the U.S. (*4.8%*). Key measures of challenges faced by the Inland Empire include the fact that 47.1% of its adult population had a high school or less education in 2015. That compares to 39.0% for the rest of Southern California (*Imperial, Los Angeles, Orange, San Diego, and Ventura*). Those with AA degrees or higher was 27.8%, well below the 40.6% for the rest of the Southland. The shares with BA's or higher were 20.1% locally versus 33.4% in the balance of Southern California. These facts limit the kinds of firms for which the area is competitive. The shares have improved from 50.3%, 23.1% and 16.3% respectively in 2000. Related to these education metrics is the fact that the area faces serious public health issues in that 17.5% of all people and 25.0% of children under 18 were living in poverty in 2015. That compares to 15.1% and 20.7% for the balance of Southern California.

Like all regional economies, the key for Inland Empire's growth is the expansion of the economic base sectors for which it has competitive advantages. This is the group of activities bringing money to it from the outside world. Fundamentally, there are now five key sectors:

- **Logistics** firms have located in the Inland Empire in response to its available land and the need to handle both the huge flow of goods moving in and out of the U.S. via the ports of Los Angeles and Long Beach plus the rapid expansion of fulfillment centers that handle the explosive expansion of e-commerce. They were responsible for 23.3% of the area's direct job growth in the 2011-2016 recovery (*55,252*) including an estimated 25.1% of 2016 growth (*10,133*). At that year's growth rate of 6.7%, the sector is likely to create another 11,221 jobs in 2017 to reach 174,989.

- **Construction** has historically been the major driver of the Inland Empire's economy given its undeveloped land and Southern California's need for single family homes, industrial facilities, and infrastructure. The mortgage crisis upset the first of these needs and was largely responsible for the local sector losing -68,408 jobs from 2006-2011 (-*53.7%*). From 2012-2016, it has gained back 31,305 jobs. Several positive factors are appearing. Total permit valuation rose 13.4% in 2015. Industrial and infrastructure construction is booming and residential housing permits rose 11.8% to 7,760 in 2015, weak by historical standards but the strongest since 2007. Based upon job growth of 6.7% in 2016, it is estimated that the sector will add 5,500 jobs in 2017 to reach 95,910 positions. That would still be -24.8% below the 2006 peak.

- **Health Care** firms are expanding in the Inland Empire in part because the average worker in the sector is already serving 26.6% more people than California's average. Meanwhile, the Affordable Care Act has decreased the share of local residents without health insurance from 27.1% in 2013 to 13.6% in 2015. Health care firms are also beginning to respond to the fact that 23.2% of the population was 55 years or older in 2015. The area's population growth was 262,547 people or 6.2% from 2010-2016. Based upon job growth in 2016 (3.3%), it is forecasted that the sector will add 4,335 jobs in 2017 to reach 136,132.

- **Manufacturing** has been the economic base sector performing sub-par in the Inland Empire. This stems from California's punishing regulatory environment plus energy policies that now have the state's industrial electrical costs 43.3% above Nevada, the second most expensive state west of the Mississippi. As a result, the state has created only 34,600 manufacturing jobs (*+2.8%*) since January 2010, and accounted for only 4.3% of the 802,000 jobs (*+7.0%*) created in the U.S. Job creation is mostly found in the need to replace aging baby boomer technicians. Based upon job growth of 2.9% in 2016, it is estimated that the sector will add 2,879 jobs in the Inland Empire in 2017 to reach 101,243 positions. That would remain -22,159 jobs or -14.6% below the 2007 level of 118,533 before the Great Recession.

For the first time, a high paying sector is showing signs of starting to add to the Inland Empire's economic base:

- **Professional, management & scientific** work has recently started expanding. This appears to be a reaction to three factors. First, it has seen an 82.2% gain in residents with bachelors or higher degrees from 2000-2015. Even though the inland area's population is less well educated than its coastal county competitors, in this period its overall percentage of college graduates grew from 16.3% to 20.1%. It's percent of those with AA degrees or higher went from to 23.1% to 27.8%. Second, the growth of the inland economy requires increasing levels of professional service providers given its 4.49 million people and 103,586 firms. Third, the re-emergence of the construction sector creates a need for engineers and other such specialists. Based upon job growth of 2.0% in 2016, it is estimated that the sector will add 1,021 jobs in 2017 to reach 54,030 positions.

Given the high levels of poverty in the Inland Empire (*17.5% of all people, 25.0% of those under 18*), it is important to find sectors that offer workers median incomes at middle class levels provided their families have a secondary wage earner in a lower paying sector. The data show that this is possible in several sectors due to their median pay levels over $40,000, their minimal educational requirement for large shares of the workers and their growth potential. Looking at the economic base sectors and one related to them, the following is the situation:

- **Construction** (*2016 median pay: $51,915*) has 85.5% of workers in jobs requiring minimal levels of formal education, though apprenticeship is necessary for some types of work. The sector has struggled but has become the second fastest growing in the inland area though firms continue having trouble finding workers.
- **Logistics** (*2016 median pay: $45,456*) has 83.0% of its workers in jobs requiring high school or less schooling. The sector is the fastest growing in the Inland Empire.
- **Finance, Insurance & Real Estate** (*2016 median pay: $50,364*) will grow as the real estate market recovers. In this sector 73.8% of workers are in jobs requiring minimal entry level educations though many require specific state certifications. Its growth requires more home sales and construction activity.
- **Manufacturing** (*2016 median pay $50,106*) offers a little job growth. However, industry leaders indicate that a large share of existing technicians are starting to retire. Of workers in the sector, 67.2% needed high school or less training.
- **Health Care** (*2016 median pay: $59,494*) has a smaller share of workers in jobs with minimal educational requirements (*40.8%*). The sector has provided significant upward mobility for those with AA degrees or post-secondary training (*41.1%*). It grows continuously, with those getting technical certification finding good jobs and the ability to moving up within the sector.
- **Professional, management & scientific** (*2016 median pay $70,729*) has a relatively small share of workers in jobs for marginally educated workers (*34.5%*). However, another 9.2% can step up to better paying jobs with AA degrees or post-secondary training.

Finally, the need for change in the Inland Empire's economy is underscored by the fact that the median income adjusted for inflation has been nearly stationary (-*3.6%*) between 1999-2015. Per capita income has faired better in that it is up 4.2% from 1990-2015. However, this measure is pulled higher by the small share of people with high incomes. That fact is seen by the imbalance in the income distribution. Thus in 2015, the 9.8% of households earning over $150,000 captured 25.9% of all income. That group together with those earning $100,000-$149,999 (*23.6*% together) of households captured 50.4% of the Inland Empire's income. The 44.6% of families earning below $50,000 had a 16.5% share of the area's income.

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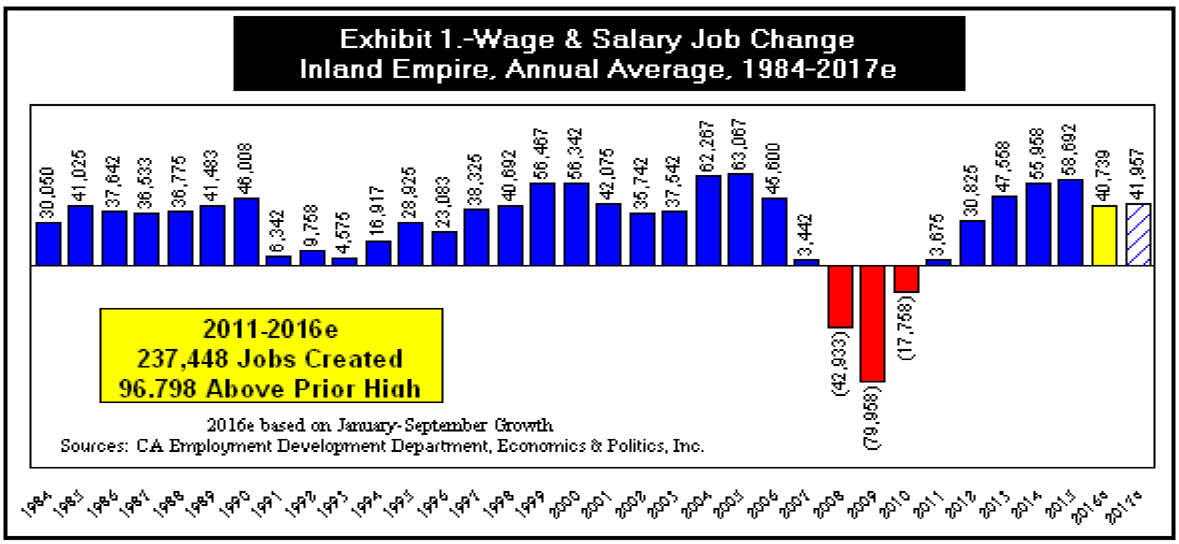
I. Economic Recovery

A. Forecast & Justification

In 2016, the Inland Empire is on-track to reach 1,403,139 jobs and exceed its pre-recession employment level by 96,798 based on CA Employment Development Department (*EDD*) data. This includes a 2016 gain of 40,739 (*3.0%*) based on the growth rate through September. It is likely an underestimate given EDD's history with the market. For instance, through November 2015, their data showed a 48,645 job gain (*3.7%*) for 2015 that was later revised to 58,692 (*4.5%*), a 10,000 job error. Conservatively assuming EDD is accurate for 2016, the inland economy is up 237,448 jobs from 2011-2016, well over the -140,650 lost from 2008-2010. Using a 3.0% growth for 2017, the economy would add another 41,957 jobs to reach 1,445,097 (*Exhibit 1*).

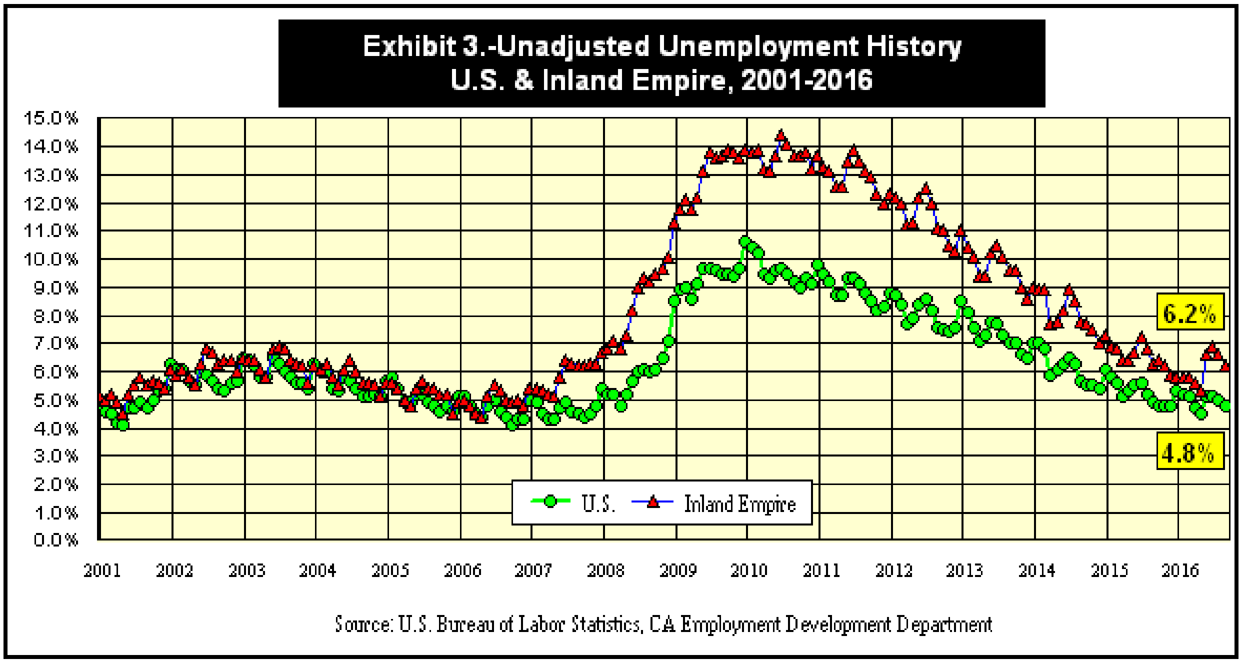


Annually, EDD's job estimates must be revised to U.S. Bureau of Labor Statistics levels. From March 2015-2016, they had Inland Empire non-agricultural growth at 45,200 jobs (*3.39%*). BLS had it at 47,063 (*3.53%*) (*Exhibit 2*). EDD's history of these types of results shows that EDD's methodology has been overly conservative in estimating job growth for the inland market.

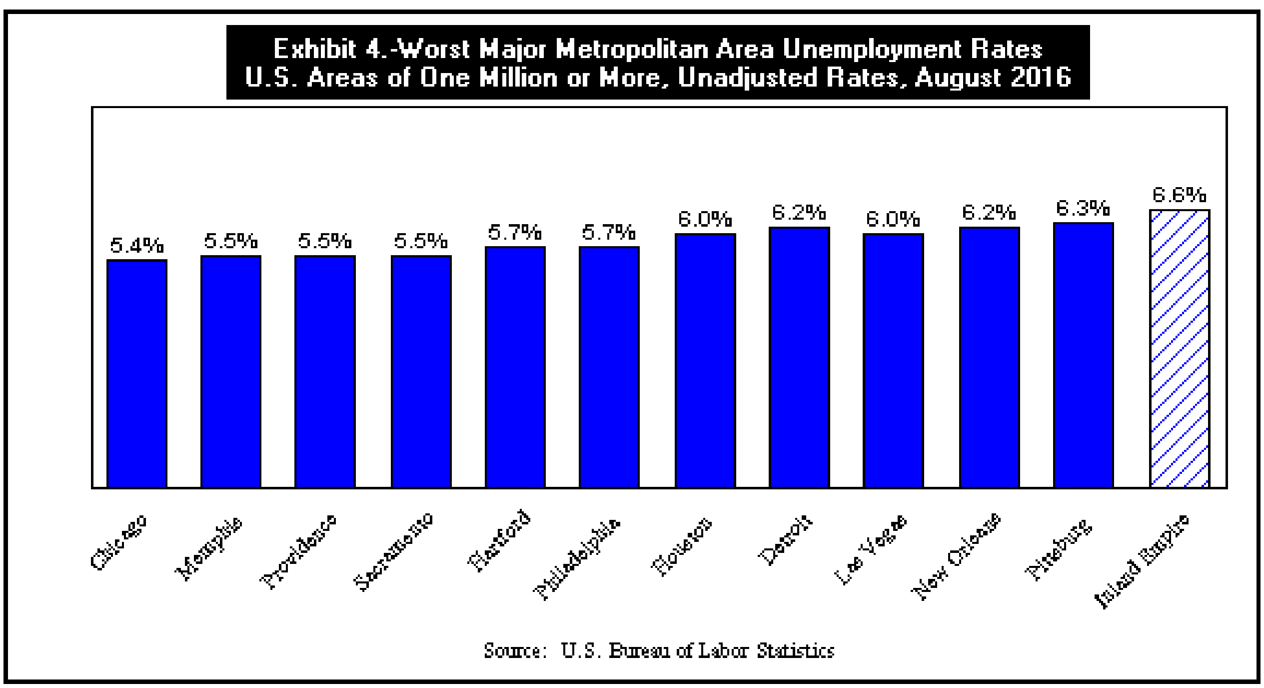
Exhibit 2.-Non-Agriculatural Job Gains, Inland Empire Counties, March 2015-2016

County	March 2015	March. 2016	Change	Percent
Riverside Co.	655,205	686,000	30,795	4.70%
San Bernardino Co.	677,832	694,100	16,268	2.40%
Inland Empire BLS	**1,333,037**	**1,380,100**	**47,063**	**3.53%**
Inland Empire-EDD	1,332,300	1,377,500	45,200	3.39%

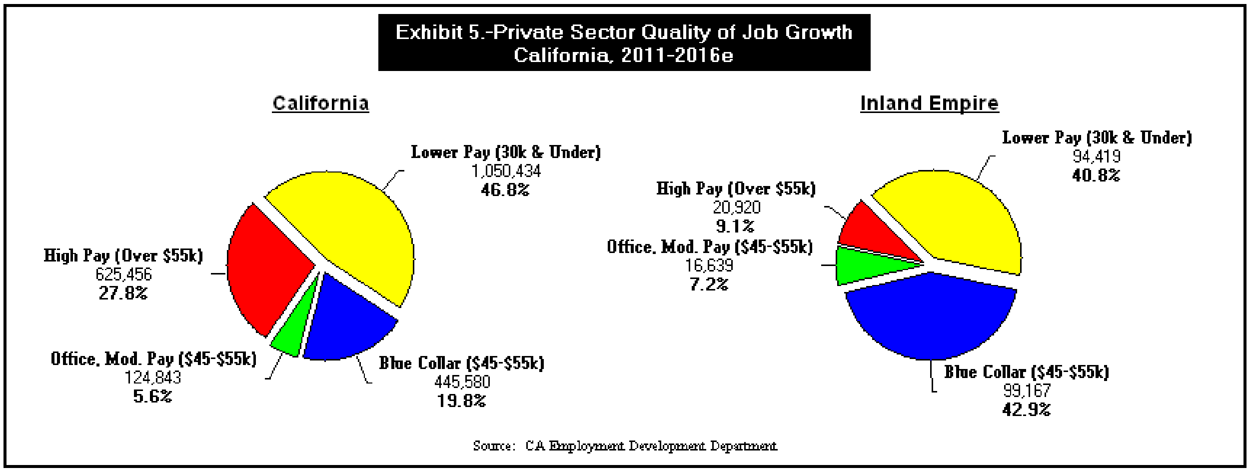
Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics



Meanwhile, the Inland Empire's unemployment rate has been falling. The September 2016 figure of 6.2% was the lowest for that month since the 5.0% figure in November 2006. The area's high for the month was 13.7% in September 2009 and 2010 (*Exhibit 3*). However, the latest figure was above the unadjusted levels for California (*5.3%*) and the U.S. (*4.8%*). Unfortunately, the area's 6.6% rate in August 2016 was the highest among U.S. metropolitan areas of one million or more people (*Exhibit 4*).



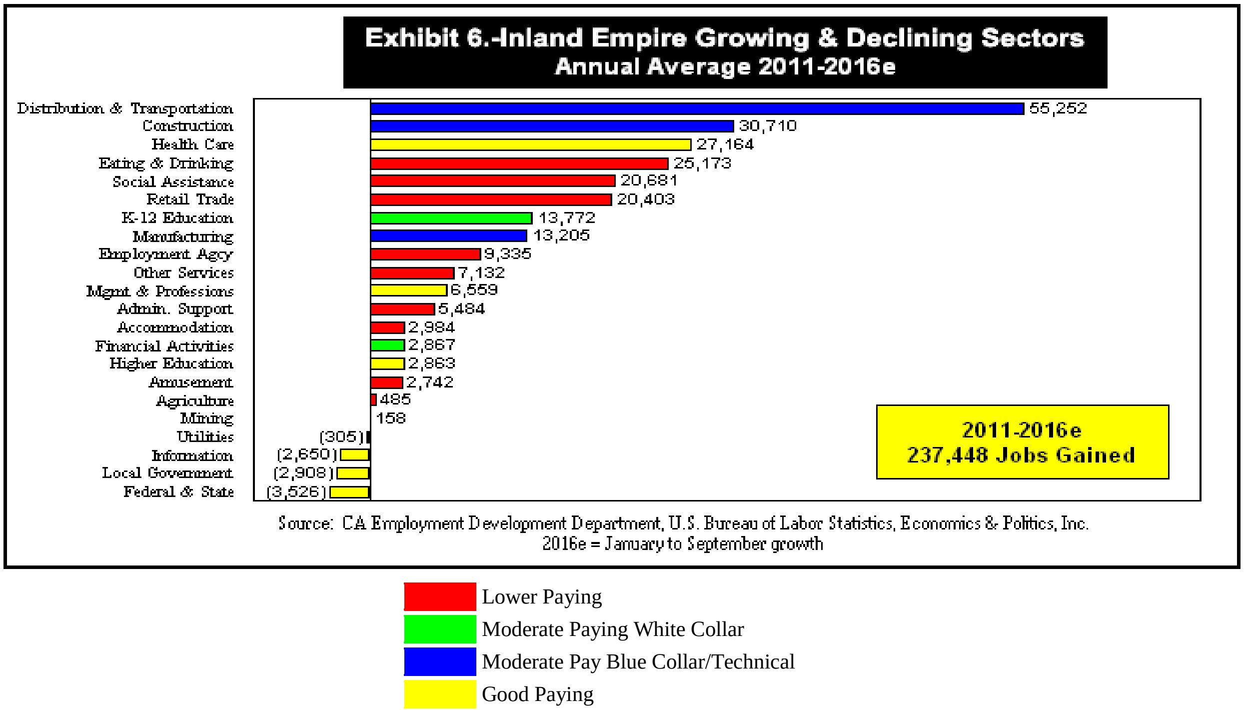
Job quality has historically been the subject of a great deal of discussion in the Inland Empire. A comparison of the area's job growth versus California from 2011-2016 in private sectors with varying pay levels produces a surprising result. In the lowest paying sectors (*under $30,000*), the local area saw 40.8% of its job growth (*Exhibit 5*). That was much less than the 46.8% share in California. In the highest paying group, the local share was 9.1% versus the state's 27.8%. The state's difficulty and the inland strength was in blue collar/technical sectors paying $45,000-$55,000 with a 42.9% local share versus the state's 19.8%. The share in $45,000-$55,000 office based sectors were 7.2% v. 5.6%. These data highlight the state's problem in seeing its blue collar/technical sector routes to the middle class being cutoff. They also underline the need for more expansion in the Inland Empire's higher paying groups.



B. Economic Challenges To Continuing The Expansion

For the Inland Empire, the key to continued expansion will be the growth of the clusters constituting its economic base. Here, the sectors that must grow include logistics, health care, and construction. Manufacturing has weakly joined this group, but suffers due to the high energy costs and heavy regulatory burden faced by that sector in California. The management, professional, engineering, and scientific group should see its role improve as those types of companies seek lower space and labor costs and respond to the stronger educational foundation in specific inland sub-areas close to the coastal counties.

All of these sectors are crucial as each one brings money from the outside world into the local market that then recirculates allowing local population-serving sectors to add to growth. The logistics and manufacturing sectors do so because their customers are largely located throughout the state, country, and world. Health care brings in funds since the sector is largely funded through federal or state programs or by medical insurance companies. Construction does so because projects are funded either by governmental infrastructure grants or private loanable funds flowing to local contractors and workers from the national mortgage market. The management, professional, engineering, and scientific group is a mixed part of the base. Some firms are financed by selling services to the outside world. Others indirectly receive outside funds through selling services to those firms. However, some of these high-end firms primarily sell services to the local population.

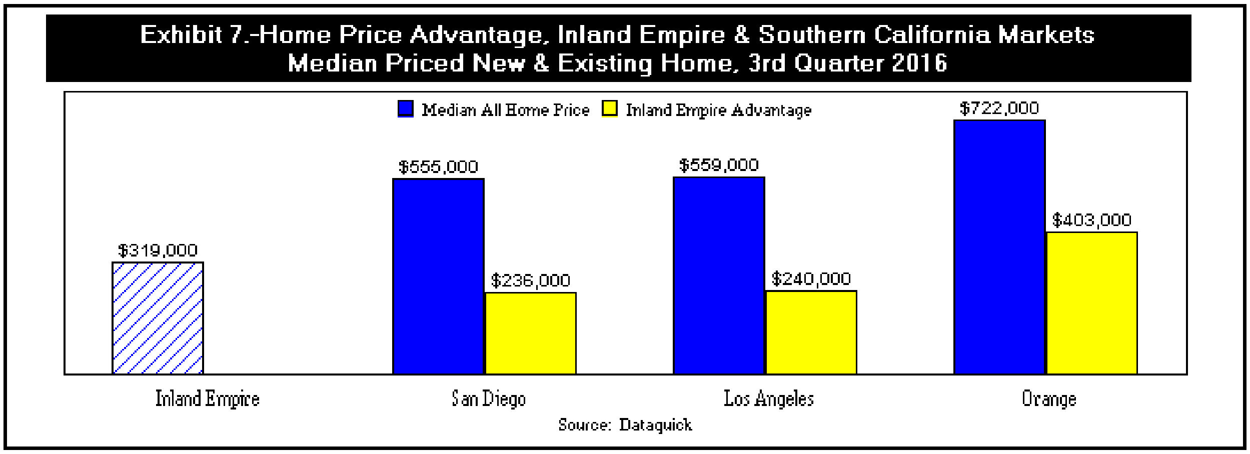


Each of these five sectors faces issues:

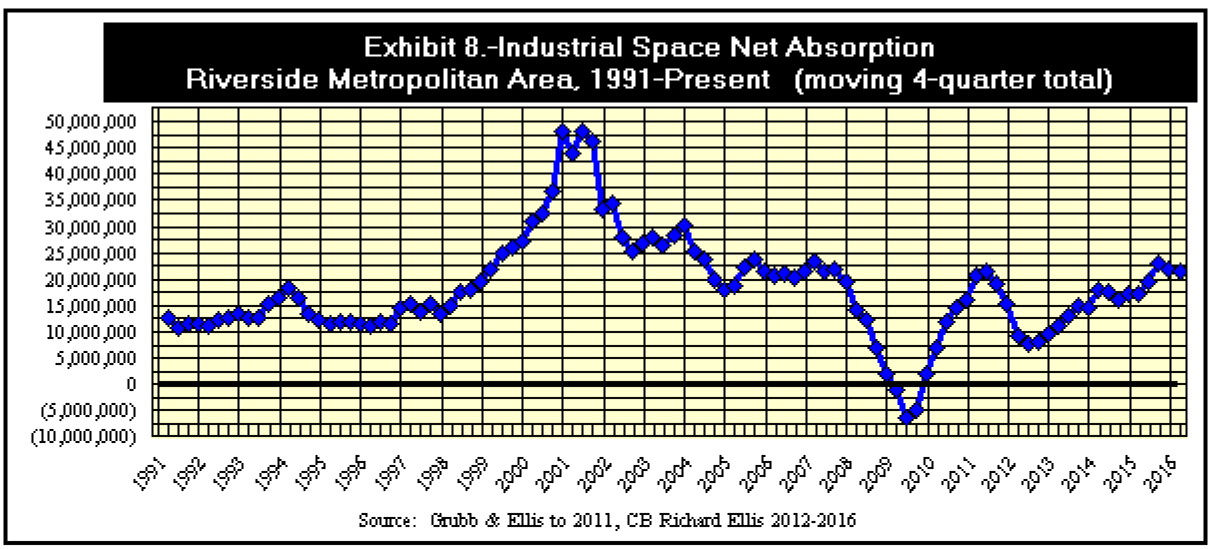
1. **<u>Logistics</u>** has been the Inland Empire's fastest growing sector and has strong basics. However, local activists want to stop its growth and the South Coast Air Quality Management District (*AQMD*) and CA Air Resources Board (*CARB*) believe it cannot meet its air quality requirements unless the truck traffic associated with the sector is dramatically reduced. A major fight is brewing that could conceivably halt the sector's strong continual expansion. From 2011-2016, the data indicate that it has been responsible for 23.3% of direct job growth (*55,252 jobs*) (*Exhibit 6*). That has held in 2016 during which it had a 25.1% share of new jobs (*10,133*).

2. **<u>Construction</u>** is the sector that has not yet returned to its normal strength as a driver of the Inland Empire's growth. That is the case since it lost -68,408 jobs from 2006-2011 (*-53.7%*). From 2011-2016, it has gained back 30,710 indicating that the sector still has a long way to go.

   Construction should gain strength in the near term. One reason is the lack of housing affordability in the coastal counties that is already pricing thousands of families out of those markets. (*Los Angeles: 30%; San Diego: 26%; Orange: 22%*) The Inland Empire's $319,000 median priced home is $236,000 to $403,000 less expensive than those in those counties (*Exhibit 7*). Historically, this will ultimately drive people with all types of incomes and educations to migrate inland for homes they can afford. However to date, the speed at which this is occurring has been blunted by the low FHA, Fannie Mae and Freddie Mac conforming loan limit (*$356,500*) for the inland market. Consumer fears of making large purchases given their experiences in the Great Recession also appears to remain a factor.

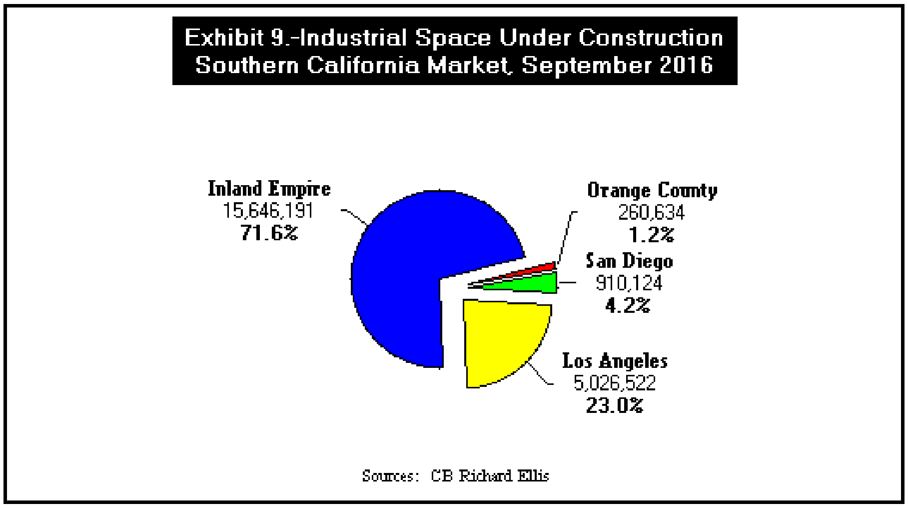


A second reason for construction optimism is the strength of the Inland Empire's industrial market where logistics firms occupied a net of 19.4 million square feet of space in the year ended September 2016 (*Exhibit 8*), while 15.6 million square feet is being built. That means the market is only roughly matching its net absorption. Both those figures are the strongest in the U.S., and the inland area is handling 71.6% of Southern California's industrial construction due to its available land (*Exhibit 9*). Meanwhile, extensive infrastructure construction is on-going largely thanks to local transportation sales tax measures.



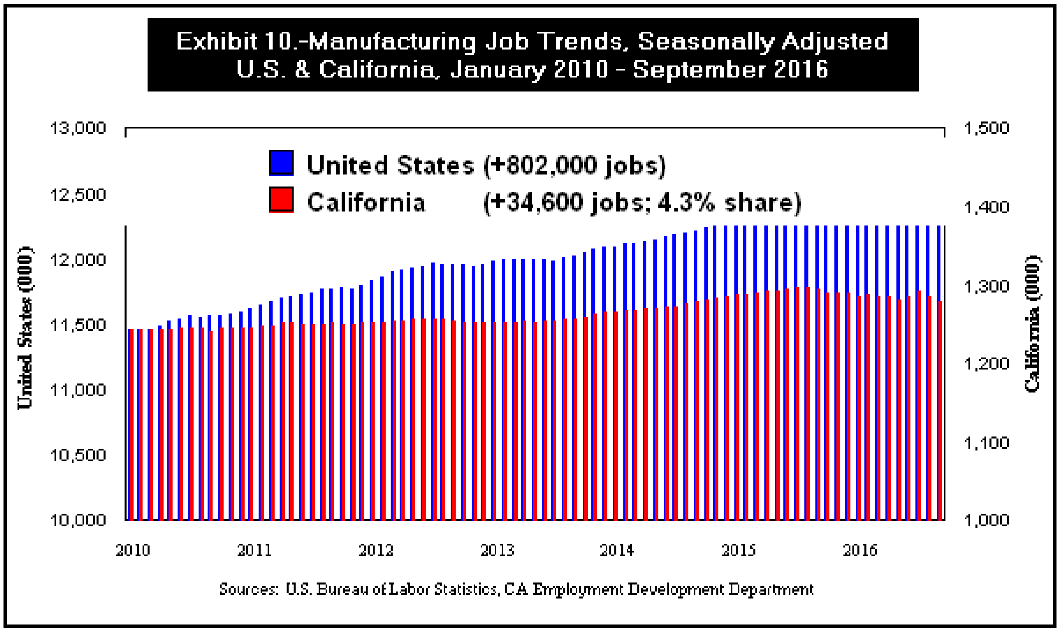
3. **<u>Health Care</u>** is the one inland sector that grew throughout the recession. There is a huge need for this to continue since each local health care worker already handles 26.6% more people than the state average. Also, the sector is seeing a major increase in demand as the share of people without health insurance fell from 27.1%

in 2013 to 13.6% in 2015. Still, there are 365,374 non-institutionalized adults without insurance. From 2011-2016, the data indicate that it has been responsible for 11.4% of direct job growth (*27,164*). That fell somewhat in 2016 (*4,178 jobs; 10.3% share*). The key for the health care system's job growth will likely be the



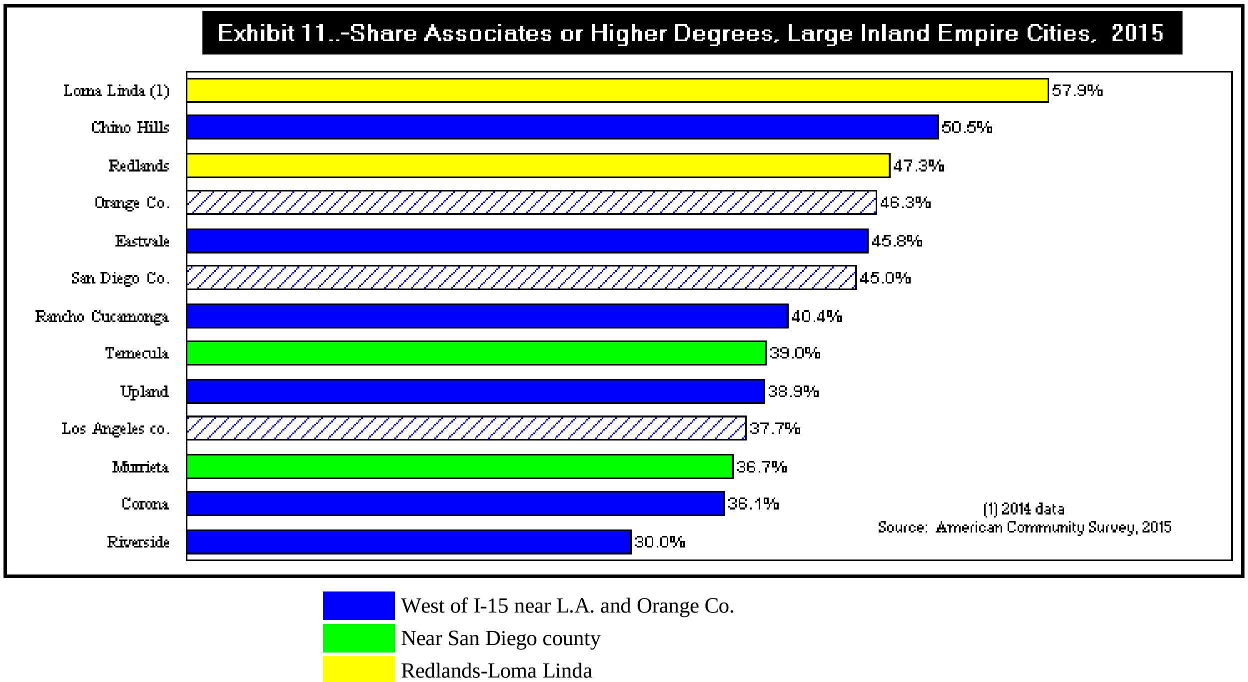
ability of educational institutions to gear up to handle the volume of training that its growth will require in both professional and technical occupations. Also, management has the complexities of dealing with the sector's new dynamics under the Affordable Care Act.

4. **Manufacturing** should be a major growing sector in the Inland Empire as both space and labor costs are below other Southern California areas. This is particularly true given the recent resurgence in manufacturing employment nationally. However, local firms are tending to increase efficiency rather than hire workers because California's regulatory policies have pushed energy levels far beyond what competitors pay in other states. That fact, plus regulatory costs and delays means firms must save on labor to maintain their profitability. Here, a key finding is that on a seasonally adjusted basis, California only created 34,600 jobs from January of



2010 to November 2016 (*2.8% growth*) while the U.S. added 802,000 (*7.0% growth*). The state saw just 4.3% of new U.S. manufacturing jobs. Still, the Inland Empire has added 13,205 jobs in the sector from 2011-2016 (*5.6% share*). That includes the estimated 2,789 positions (*6.9% share*) in 2016 (*Exhibit 10*).

5. **Professional, engineering, management & scientific** sectors have been the missing link in the Inland Empire's job growth. However, they are showing a little life. From 2011-2016, the group added 6,559 jobs (*2.8% share*). This includes an estimated 1,000 (*2.5% share*) in 2016. Several phenomena offer potential for this group. First is the migration of better educated people to three parts of the area: cities west of the I-15 near Los Angeles and Orange counties (*blue*); cities near San Diego County (*green*); and the Redlands-Loma Linda area (*yellow*). In these areas, the inland cities are competitive with the coastal counties (*stripped*) (*Exhibit 11*).



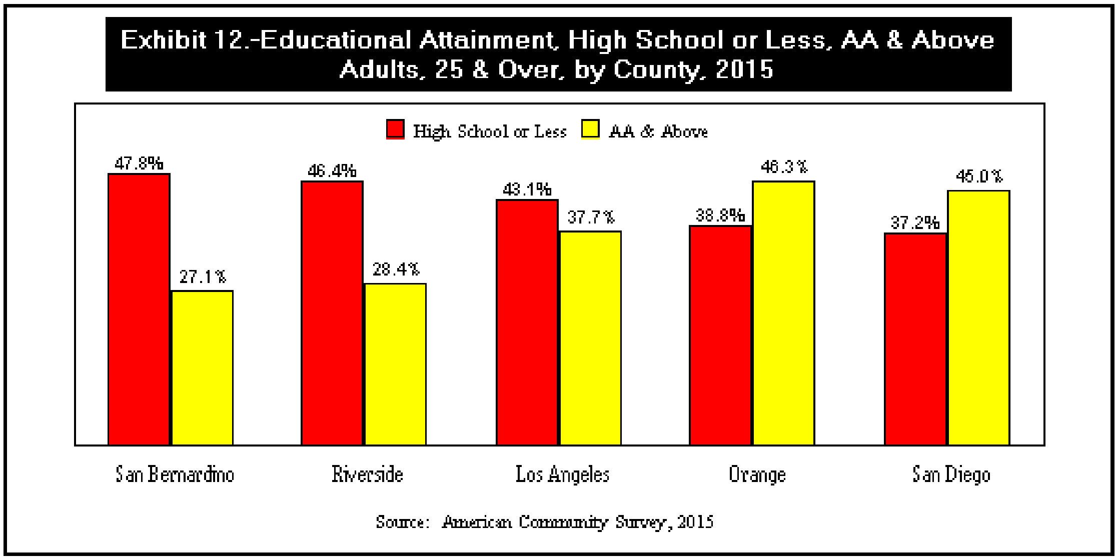
Second is the sheer size of the Inland Empire market with 4.49 million people (*larger than 25 states*) and 103,586 companies that require professional services. Third is the existence of some strategic and successful high-end companies including Bourns (*product engineering*), SigmaNet (*management software*), Abbot Cardiovascular Systems (*bio-med*), Watson Pharmaceutical (*generic drugs*), ESRI (*geographic information systems*), and Kelly Space & Technology (*aerospace*). Fourth is the reemergence of the construction sector that requires engineers and other professionals to support it.

Today, the main challenges for this group have been the overall low level of educated workers in the inland area and the slow recovery of residential construction.

C. Public Health Challenges To Inland Empire's Prosperity

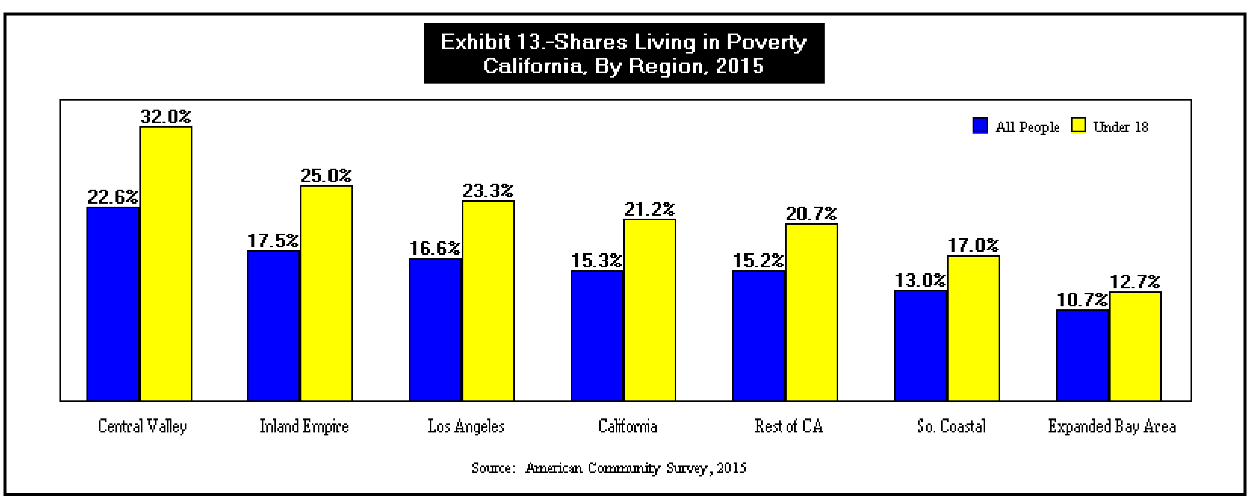
Two other key public health issues impact the ability for the Inland Empire to attain prosperity. These are the degree to which the region's population is marginally educated and the level of poverty affecting its residents.

According to the Census Bureau in 2015, 47.8% of San Bernardino County's population had stopped their educations with high school or less schooling. The share was 46.4% in Riverside County (*Exhibit 12*). The situation has improved in that both counties were on either side of 50% of the population in 2000 (*50.8%; 49.7%*). However, these data mean that the kinds of firms interested in locating in the Inland Empire tend to be those not needing well educated workers.



For the Inland Empire, the degree to which it is uncompetitive for firms requiring educated workers is seen in that just 27.1% of adults in San Bernardino County had associates degrees or higher. It was 28.4% in Riverside County. These 2015 figures contrast with 37.7% to 46.3% of adults in Southern California's coastal counties.

- Unfortunately, a marginally educated population tends to correlate with high levels of poverty given the direction that technology is taking good paying jobs in the 21st Century. Thus in 2015, the share of Inland Empire residents living in poverty was 17.5%. Only the Central Valley has a worse level (*22.6%*). Worst, exactly one in four inland area children under 18 were poor (*25.0%*). Again, only the Central Valley had a hire percent (*32.0%*) (*Exhibit 13*). Poverty also has an ethnic dimension. By group (*not shown*), those Inland Empire residents living in poverty were: African American (*25.5%*), Hispanic (*21.7%*), Asian (*11.9%*), White (*11.2%*). These facts create enormous difficulties for the Inland Empire's quality of life. In particular, given the importance of children to the region's future labor force, the levels of childhood poverty represent a major barrier to the region's long term success.



II. Key Growth Industries More Thoroughly Discussed

A. Key Existing Industries

- **<u>Logistics</u>.** The Inland Empire's logistics industry is driven by two major forces:
  - **International Trade.** The volume of international trade moving through the ports of Los Angeles and Long Beach has been the sector's traditional driver (*Exhibit 14*). On the import side, loaded containers entering the U.S. soared to 8.2 million twenty foot container units (TEUs) in 2006. The volume declined roughly 25% to 6.0 million teus in 2009 due to the Great Recession. It has subsequently recovered and is on track as of September 2016 to reach 7.9 million TEUs for the year. That would be the third highest volume ever.

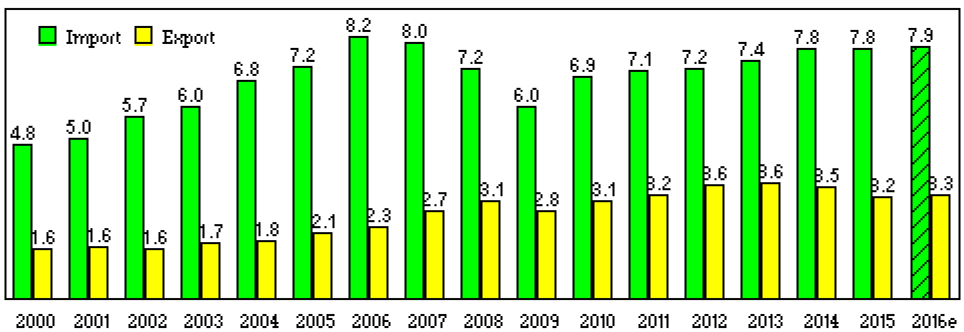


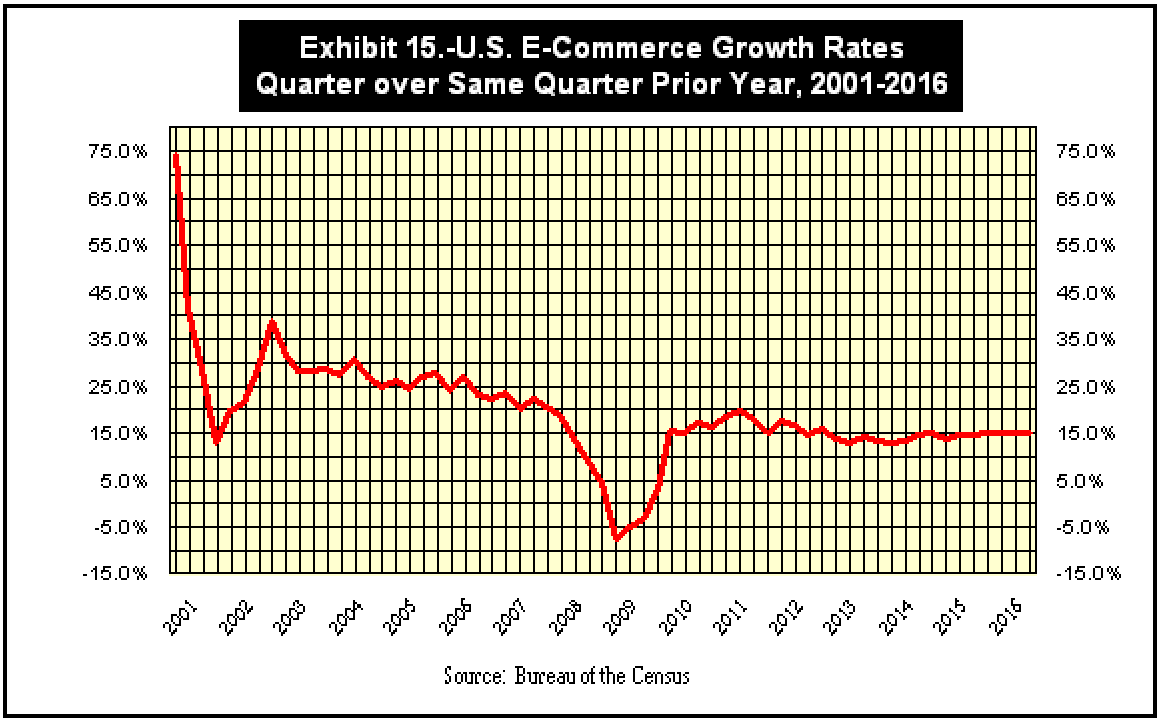
Exhibit 14.-Import & Export Container Volume, 2000-2016e
Ports of Los Angeles & Long Beach (mil. teus)

2016e = Based upon growth experienced Year to Date, September
Source: Port Import Export Reporting Service (PIERS), collected from Vessel, LA-LB for 2011-2016

  Exported load containers are less of a driver for the Inland Empire. However, they reached a record 3.6 million TEUs in 2012-2014 but have fallen to 3.3 million in 2016 with the high value of the dollar making U.S. exports more expensive to the rest of the world. Exports are an activity that will likely have an important future role for the inland area as immigrant manufacturers choose to locate near the ports and because of the importance of exports to the Coachella Valley's farmers.

  The facilities for handling this type of activity for international supply chain work are getting larger and larger due to the technology. The number of square feet per job in new conventional warehouses is running between 3,000-3,500 square feet.

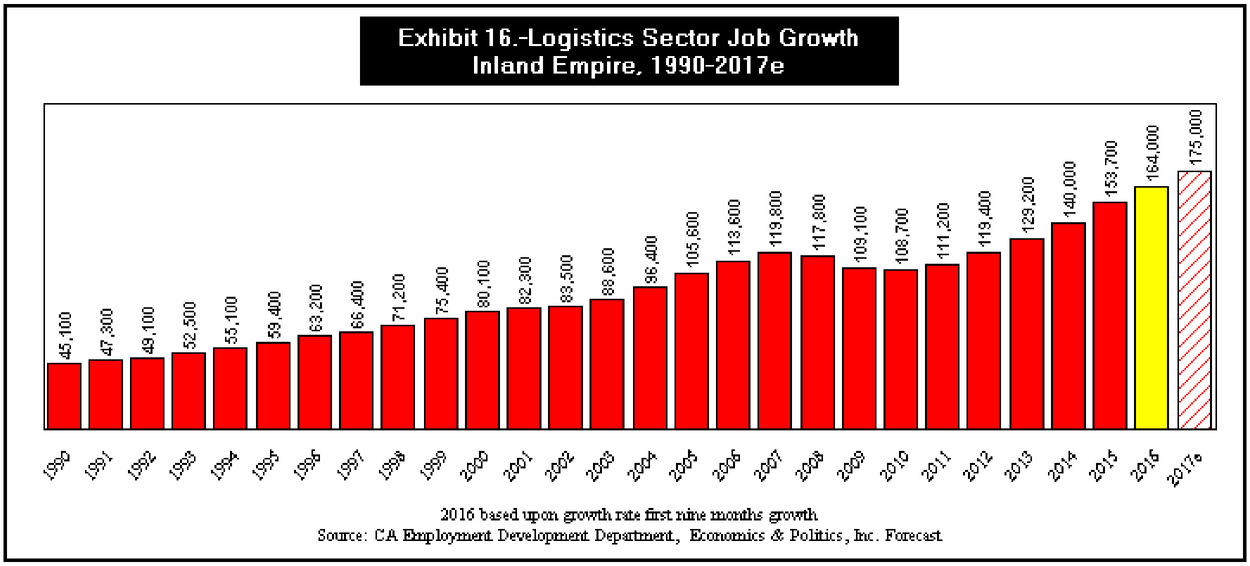
  - **Fulfillment Centers.** The newest phenomenon impacting the Inland Empire's logistics sector is the entry into California of fulfillment centers. These facilities are being developed for retailers so they can respond to the increasing use of the e-commerce by consumers. The goal is 24-hour delivery. They are generally 750,000 to over 1,000,000 square feet in size and use from 750 to 1,250 square feet per job since the work is more labor intensive. That is roughly the land use ratios found with manufacturing. This is a long term growth factor for the region given that e-commerce is growing roughly 15% compounded a year (*Exhibit 15*).



Another aspect of fulfillment centers is their retail sales tax potential for the cities where they locate. A one million square foot facility on 52 acres of land, conservatively assuming 50% of sales are to non-Californians, will generate as much as $5 million a year to a municipal government under two conditions. It assumes the center's sales per square foot are 75% of the Amazon.com average and it assumes that it is the sole warehouse for an on-line retailer located in the state.

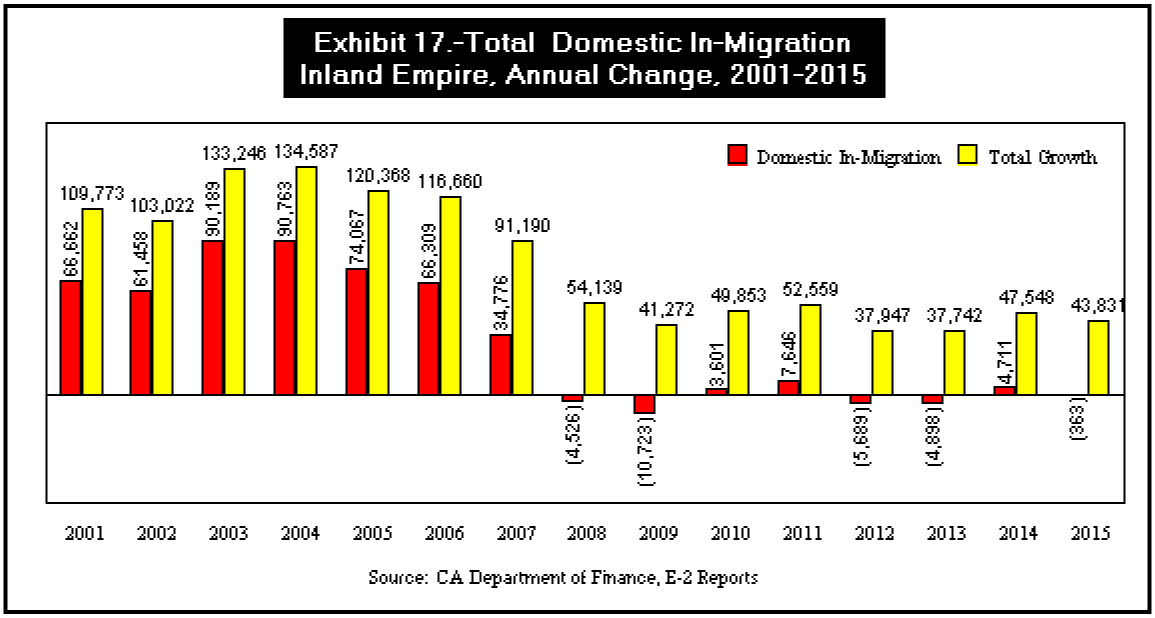
- **Forecast.** At the 6.7% growth rate through September 2016 (*10,133 jobs*) the Inland Empire's logistics sector is likely to create another 11,221 jobs in 2017 to reach 174,989. The sector could exceed that level given that the U.S. dollar is 21.1% stronger in 2016 than 2015, reducing the cost of imported goods. To date, there appears to be no economic reason for its growth to be seriously imperiled for the foreseeable future. That is particularly true given that most of Southern California's available industrially zoned land is located in the Inland Empire (*Exhibit 16*).
- **Caution.** That said, both CARB and AQMD are attempting to create an "indirect source rule" whereby new logistics facilities would be charged fees based upon the truck traffic they "lure" to the Inland Empire. If successful, their attempt to become part of local planning decisions could slow the sector's inland growth. Another potential difficulty is the pending opening of the Panama Canal which will have an indeterminate impact on goods arriving at the ports of Los Angeles and Long Beach. That is being offset to an extent by the huge size of new ships of 14,000 TEUs and above that cannot go through the new canal. However, their size is straining the ability of the ports to unload them. In addition to date, cargo has not

been loaded on them in a logical way in Asia to permit easy unloading and movement away from the ports, straining their throughput capacity.

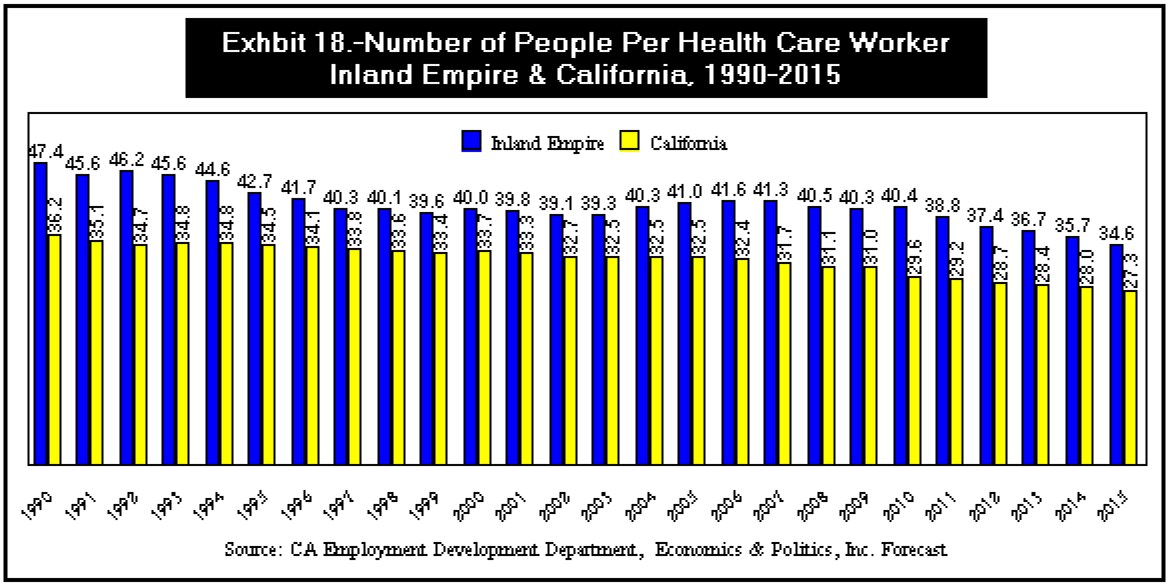


- **Health Care.** Four factors will drive the demand for health care in the Inland Empire and the sector's resulting employment level:
  - **Population Growth.** For the past few years, the recession has restrained residential development and therefore population growth in the inland area (*Exhibit 17*). From 2000 through 2006, the inland counties added over 100,000 people a year with domestic in-migration responsible for over 60,000 new residents. First soaring home prices and then the Great Recession changed this picture dramatically with annual growth falling to an average of around 40,000 people a year and domestic net migration essentially reaching just below zero.

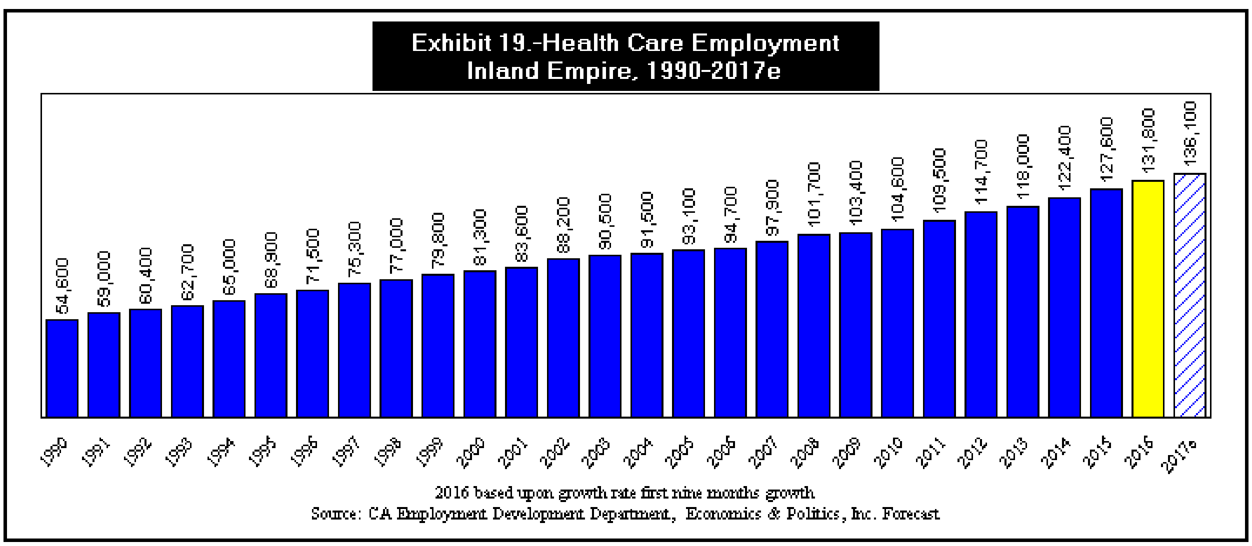
This is poised to change with the acceleration in the recovery of Southern California's economy. Also as stated, the share of families in Orange (*22%*), San Diego (*26%*) and Los Angeles (*30%*) counties who can afford a local home has fallen far more than the 46% in the Inland Empire. As more aggressive population expansion in the Inland Empire resumes, the demand for health professionals will rise. Contributing to this phenomenon is the fact that the California legislature has so far been unwilling to amend the CA Environmental Quality Act (*CEQA*) which is being used by NIMBYs in the coastal counties to nearly stop the construction of homes that the workforce population in that area can afford.



- **Affordable Care Act.** In 2013, the American Community Survey found that 27.1% or 712,217 of the Inland Empire's non-institutionalized adults had no health insurance. In 2015, those figures were down to 13.6% and 365,374. That was a reduction of -346,843 adults or -48.7%. This represents a substantial increase in demand for health care services. The sector's employment has not adjusted as rapidly in part because local out-patient and in-patient care facilities are still working through the process of how to gear up for the increase in demand.
- **Health Care Workers Per Capita.** While demand for health care and the number of workers is rising in the inland counties, the region remains underserved. In 2016, there were 27.3 people for each health care worker in California (*Exhibit 18*). In the Inland Empire, it was 34.6. The region thus had 26.6% more people for each health care worker. The good news is that in 2010, there were 36.3% more people per worker than the state, so the situation is improving. In terms of physicians, the Inland Empire had the lowest ratio of primary (*43*) and specialty doctors (*77*) per 100,000 people of any California region in 2011. The state averages were respectively 64 and 130.

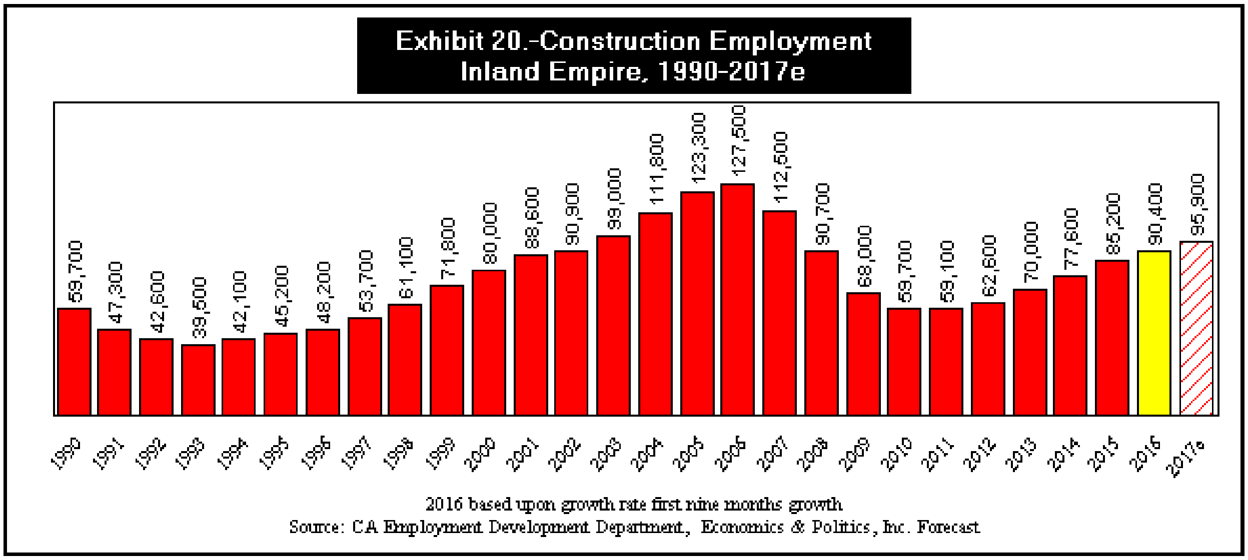


- **Aging Population.** In 2015, there were 1,001,074 people aged 55 and over in the Inland Empire. They constituted 22.5% of its population. In 2016, this was up to 1,040,569 and 23.2%. Many in this group are already in ages that disproportionately use medical care including assisted living facilities. The number is set to grow as the baby boomers in this group move beyond 65.



- **Forecast.** The Inland Empire's health care sector was unique in growing straight through the Great Recession. In 2015, the sector maintained that record adding 5,233 jobs (*4.3%*) to reach 127,600. For 2016, the area is on track to add another 4,197 positions (*3.3%*) to total 131,797. The forecast is for growth of 3.3% again and a total of 4,335 new jobs to reach 136,132 in 2017 (*Exhibit 19*).
- **Caution.** The key worry for health care providers is the lack of a training pipeline to give them the staffing they will need to keep up with the potential for rapidly

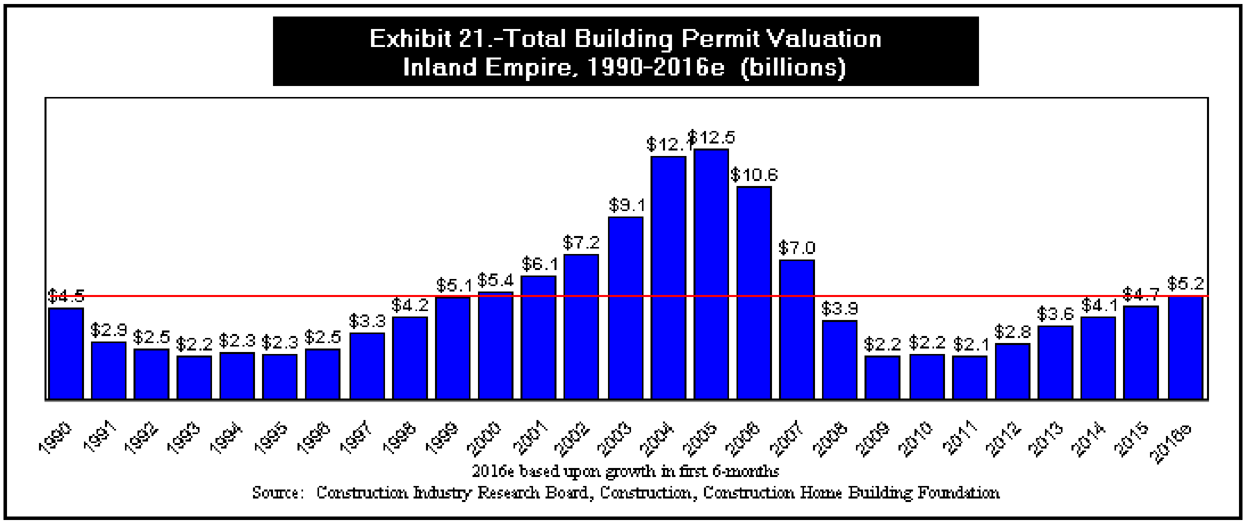
expanding demand. Fortunately, the Inland Empire has three medical schools starting to deal with this imbalance: Loma Linda University Medical Center (*non-profit*), University of California Riverside Medical Center (*public*) and Western University of Health Sciences (*private*). A fourth, California University of Science and Medicine will be located next to Arrowhead Medical Center in San Bernardino County. It is being organized and awaiting accreditation. And, Loma Linda has opened its San Manuel training facility to help entry level workers enter the field. However, to a large extent, the backbone of the system is found among nurses and a very wide variety of technicians. Here, the difficulty will be the inability of public educational institutions including the community colleges and regional occupational programs to handle the required volume as such training is inordinately expensive for them.



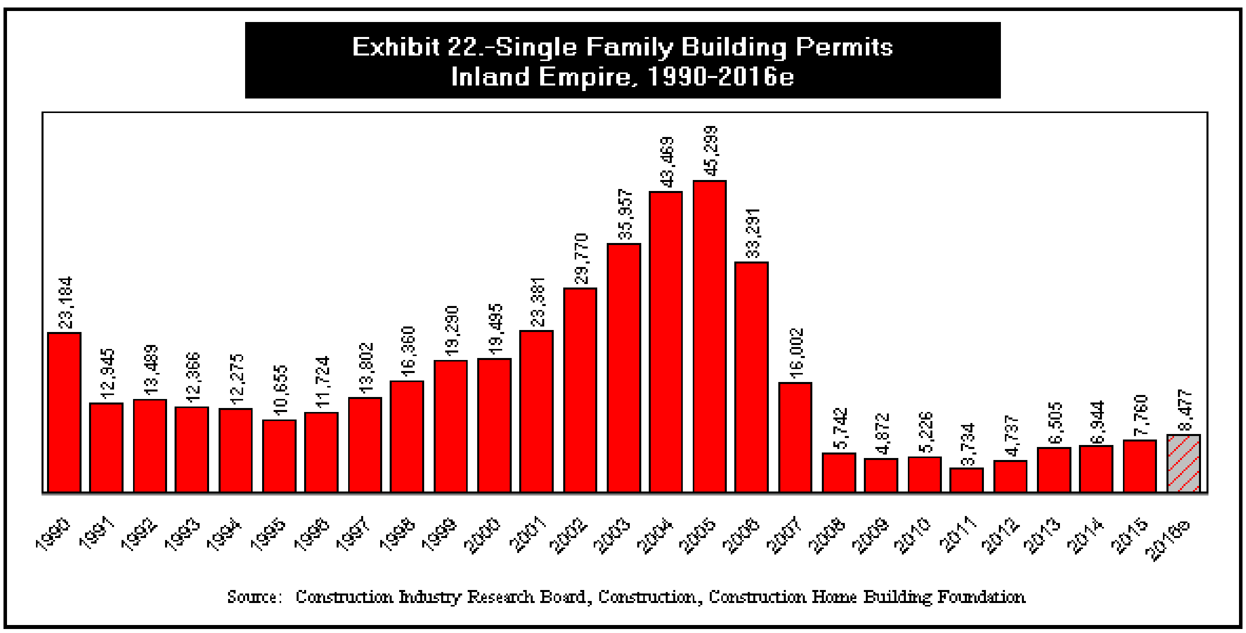
- **<u>Construction</u>.** For the Inland Empire, the lagging link in the recovery has been residential construction. After peaking at 127,483 workers in 2006, the mortgage crisis sent employment in the overall construction sector down to 59,075 jobs in 2011 (*Exhibit 20*). It has since been growing.
  - **Forecast.** In 2015, construction firms added 7,642 jobs (*9.8%*). Another 5,185 are on track to be hired in 2016 as of September (*6.1%*). That brought employment to 90,410. Using the same 6.1% growth rate for 2017, it is estimated that 5,500 more jobs will be added in 2017 bringing the total to 95,910. The metrics driving the sector include:

    1. **Permits.** Importantly, the total value of construction permits has begun to increase. For a low of \$2.1 billion in 2011, the level reached \$4.7 billion (*up 13.4%*) in 2015 and is on track to reach \$5.2 billion in 2016, up 10.9% (*Exhibit 21*). While low by the standards of the last decade, the direction is clearly a positive one as some residential projects, together with numerous industrial and

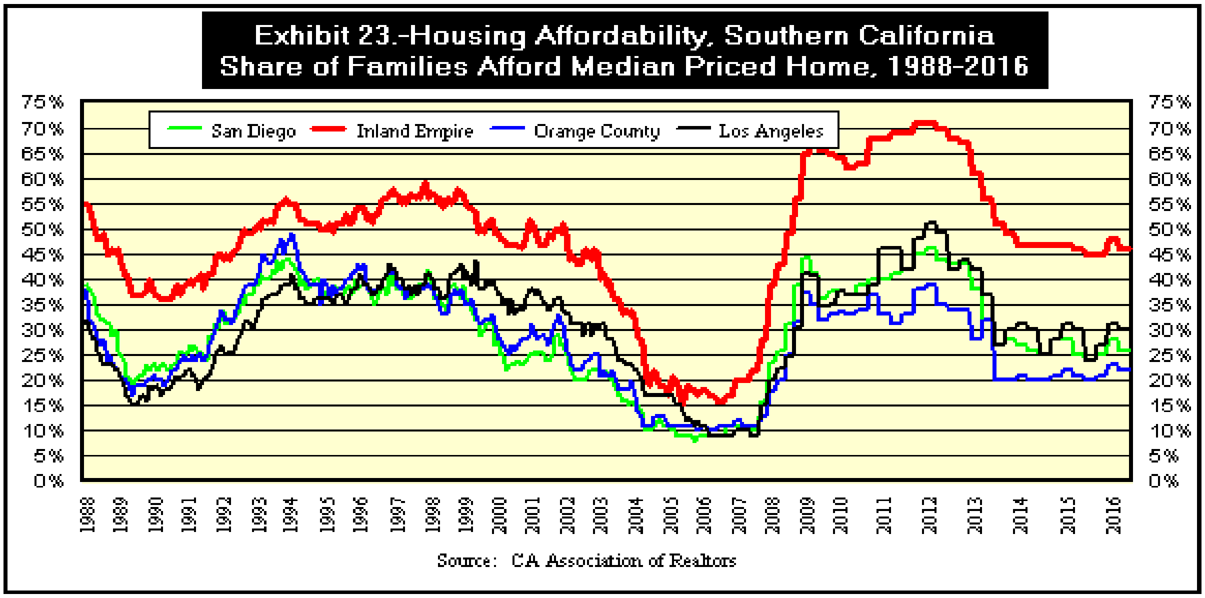
some retail projects, are being started. This does not include the public sector financed infrastructure projects under construction, thanks to local tax measures plus federal and state transportation funding.



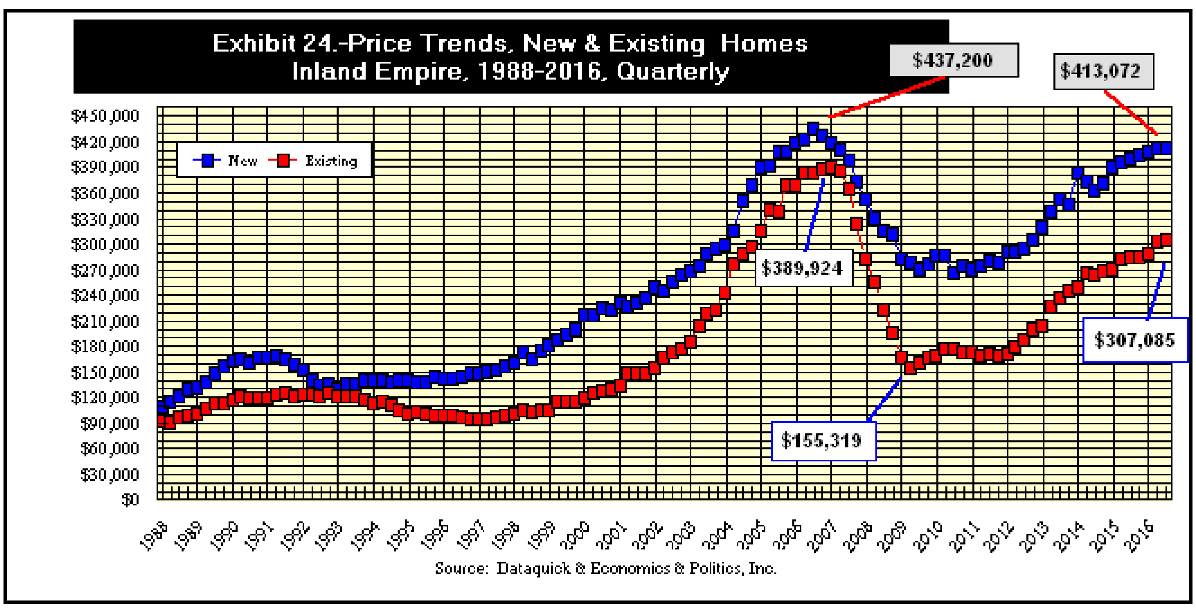
2. **Housing.** The major problem for the construction sector has been the very slow recovery in residential activity. The number of single family permits fell from 45,299 in 2005 to 3,734 in 2011. Subsequently, the market has grown to an estimated 8,477 single family detached permits based upon activity in the first nine months of 2016 (*Exhibit 22*). That is the highest level since the recession.



3. **Affordability.** As has been noted several times, the Inland Empire's residential markets are a bargain compared to the coastal counties. Affordability for local residents at the area's median income is 46%. That compares to Los Angeles (*30%*), San Diego County (*26%*), and Orange County (*22%*) (*Exhibit 23*).



4. **Price Recovery.** Very importantly, residential prices in the Inland Empire have seen a significant recovery since the mortgage meltdown. In the existing home market, the third quarter 2016 median price was $307,085, up 97.7% from the low of $155,319 in second quarter 2009 though -21.3% below the all-time high. The median new home price was at $413,072, up 54.0% from the low of $268,155and just -5.5% below the pre-recession record (*Exhibit 22*). Neither price needs to reach their all time highs for most inland homeowners to be out of trouble since many of those who bought at price peaks have long since lost their houses.



5. **Demand Preferences.** An additional fact that will ultimately encourage the Inland Empire's detached single family housing market is found in surveys conducted over a five year period by the Western Riverside Council of Governments. They twice interviewed commuters driving from that county to Los Angeles, Orange, and San Diego about their housing preferences. The responses to two questions were quite revealing:

   - As a homeowner, would you prefer to move closer to work if it involved a townhouse or condo*?* **Answer: 87.5% said NO.**
   - As a renter would you prefer to move closer to work if it involved a townhouse or condo*?* **Answer: 72.3% said NO.**

   Further, a 2016 survey by the Demand Institute found that:

   1. 84% of millennials either already own a home or that is their desire.

   There thus appears to be a stronger preference than expected for the kind of single family detached homes for which only the Inland Empire in Southern California has the undeveloped property to accommodate.

6. **Non-Residential Construction.** Non-residential activity (including multi-tenant) has fewer problems than single family housing. Here, the situation is seen in the metrics for several types of activity:

   - Industrial vacancy was 4.3% in third quarter 2016 and is only that high because construction on several new projects has been completed. Currently, 15.6 million square feet is underway, the highest construction level for any U.S. industrial market. As stated earlier, in the most recent four quarters, logistics firms occupied a net of 19.4 million square feet.
   - Office vacancy was 13.8%, down from a recent high of 24.2%. However, it is still far above the low of 7.0% in 2003 when construction activity last restarted. Currently, no projects are being built.
   - Retail vacancy was 8.9% in third quarter 2016 v. 8.8% in 2009. The sector is beginning to wake up. It had 1,108,604 square feet of net absorption in the first nine months of 2016 with 289,552 square feet under construction in September.
   - Apartment vacancy were 3.8% in Riverside County and 4.0% in San Bernardino County June 2016. Tenants paying a record $1,331 and $1,338 per month, respectively in the two counties. These were up 6.2% and 5.0% from a year earlier. This segment is building again in part due to the lack of supply detached homes for sale as well as the inability or unwillingness of many families to obtain home loans.

- **Caution.** There continues to be a host of issues facing the rejuvenation of the Inland Empire's construction sector. In the residential market, people remain hesitant to commit to new purchases in the inland counties. That will likely change as the very high costs of coastal county homes bars them from investing there. The multitenant market is strong given the increased demand from the large number of families that cannot obtain financing for single family homes.

  Industrial construction will remain a force given the demand for facilities because of rising international trade with the strong dollar and the explosive growth of e-commerce. Public construction should remain strong because both inland counties have passed local sales tax measures for street and road construction.

  Office construction will lag until a resurgence in demand occurs. That will require office based operations that retrenched in the Great Recession to return to the inland area. Some retail construction is now underway given that the Inland Empire's 2016 taxable retail sales are on course to reach $71.9 billion and exceed the 2006 record $61.1 by 17.7%. Finally, that growth has exceeded the inflation increase of 17.2% between 2006-2016 meaning that the volume of goods being sold are just above the 2006 inflation adjusted maximum.

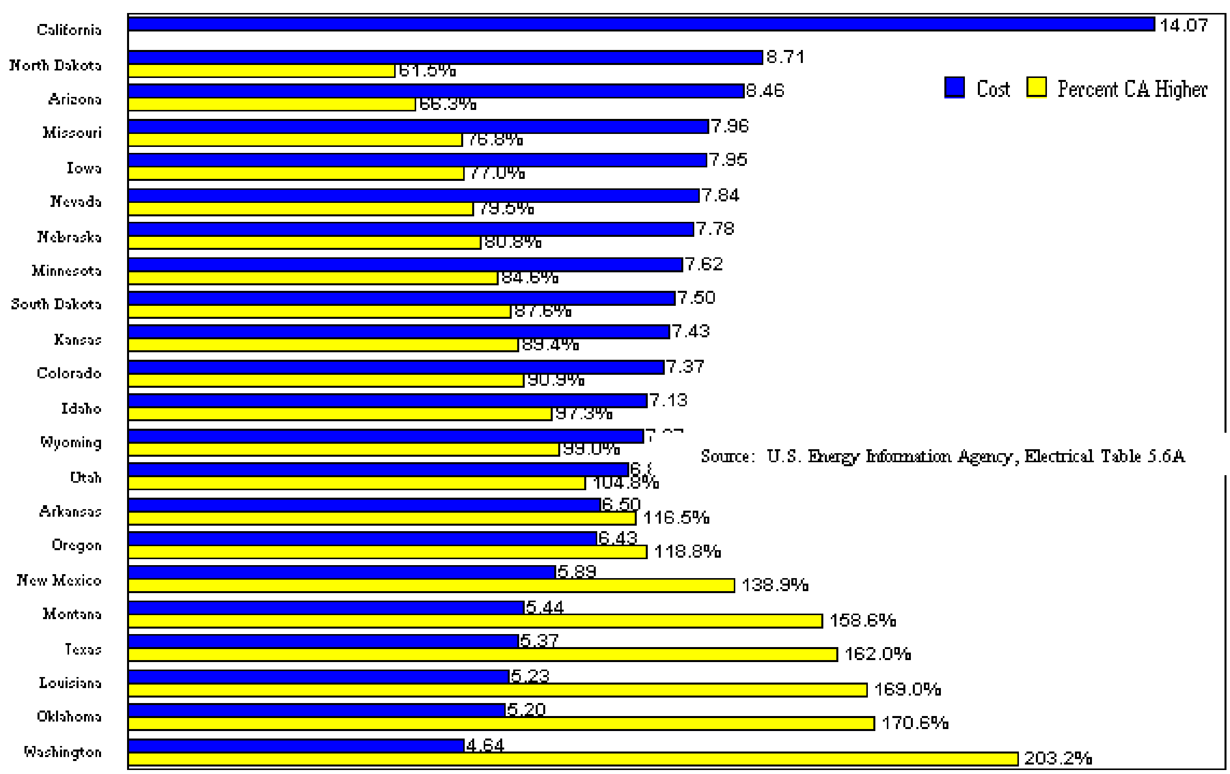
- **<u>Manufacturing</u>.** For the Inland Empire, the manufacturing sector continues to represent a missed opportunity. There are three reasons for this:

  - **National v. State Manufacturing Growth.** In recent decades, international competition and lower costs in countries like China and India have hurt U.S. manufacturing employment. In addition, a good deal of research indicates that a major reason for jobs loss in the sector is due to the domestic adoption of technology that has replaced workers. From 2010 to mid-2016, a resurgence was underway in this country. This occurred as some firms have been hurt because the off-shoring of production decreased their quality controls. Also, foreign labor costs have risen, particularly in China, reducing the incentive for U.S. firms to maintain production offshore. And, American firms have become much more productive, giving them a competitive edge for goods they sell in this country. In late 2016, this trend slowly reversed as the high value of the dollar lowered U.S. export sales.

    Still, U.S. seasonally adjusted manufacturing employment has risen by 802,000 jobs from January 2010 to September 2016, up 7.0%. The sad fact is that California has added just 34,600 jobs in this period, a 2.8% growth rate. The state has thus been responsible for only 4.3% of national growth (*Exhibit 10 above*). When asked about these data, the state's economic development group (*Go-Biz*) responded that despite the lack of job growth, the state's manufacturing output grew rapidly. However, this begs the question of why it is good to see output rise with minimal benefit to the state's workers.

- **Energy Costs.** California has put in place strong policies aimed at increasing the state's use of renewable energy. However for manufacturers and their workers, this has caused electrical costs to soar, making them uncompetitive versus nearby states (*Exhibit 25*). Thus, California's average industrial electricity rate was 14.07¢ per kilowatt hour in August 2016. That was 61.5% higher than North Dakota (*8.71¢*), the second most expensive western state. The passage of SB 350 with its mandate of 50% renewables by 2030 will undoubtedly exacerbate this cost disadvantage.

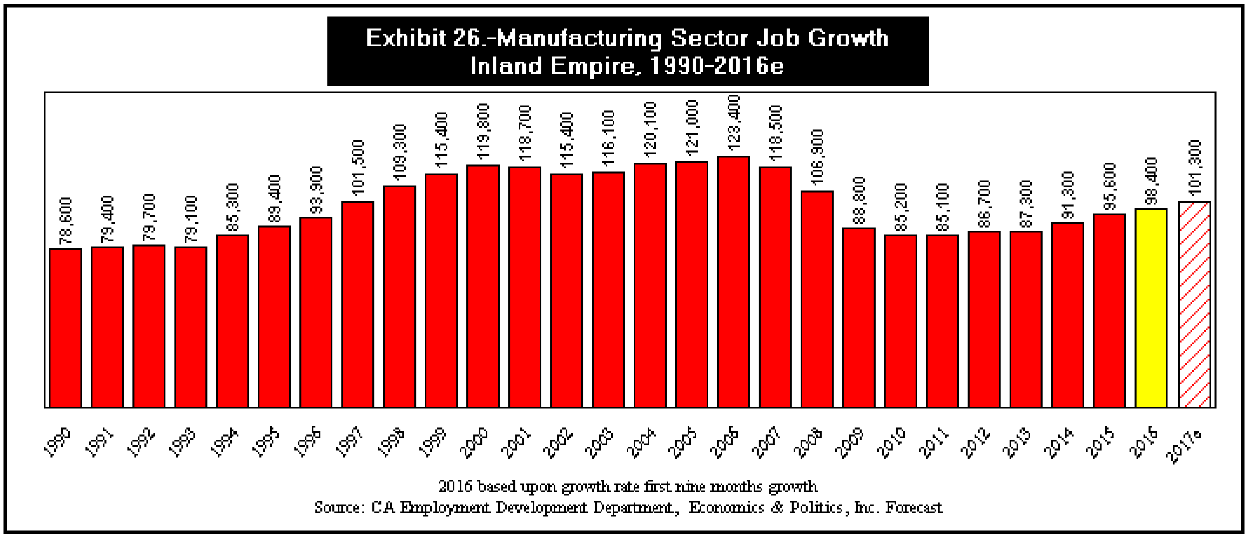
Exhibit 25.-Industrial Electrical Cost, Cents Per Kilowatthour, Western States, Aug. 2016



- **Regulatory Climate.** Meanwhile, Southern California's regulatory climate has negatively impacted its manufacturing sector in several ways. First, because the AQMD and CARB rules are continuously changed, it is very difficult for companies in places like the Inland Empire to forecast their cost structures for any realistic time horizon. As firms typically invest while looking at least five years ahead, this inhibits local expansions. Second, firms find they are often layered with regulatory costs because they must install new pollution control technologies as soon as the agency requires them to do so. Sometimes, this is before they have paid for the last round of required technology.

  An example of the uncertainty that AQMD injects into the manufacturing process is seen in the agency's declared statement that it must "electrify" the basin to meet its air quality mandates. To manufacturers, this means having to consider having to use electricity even when natural gas, for which Southern California has a far better competitive situation, is available.

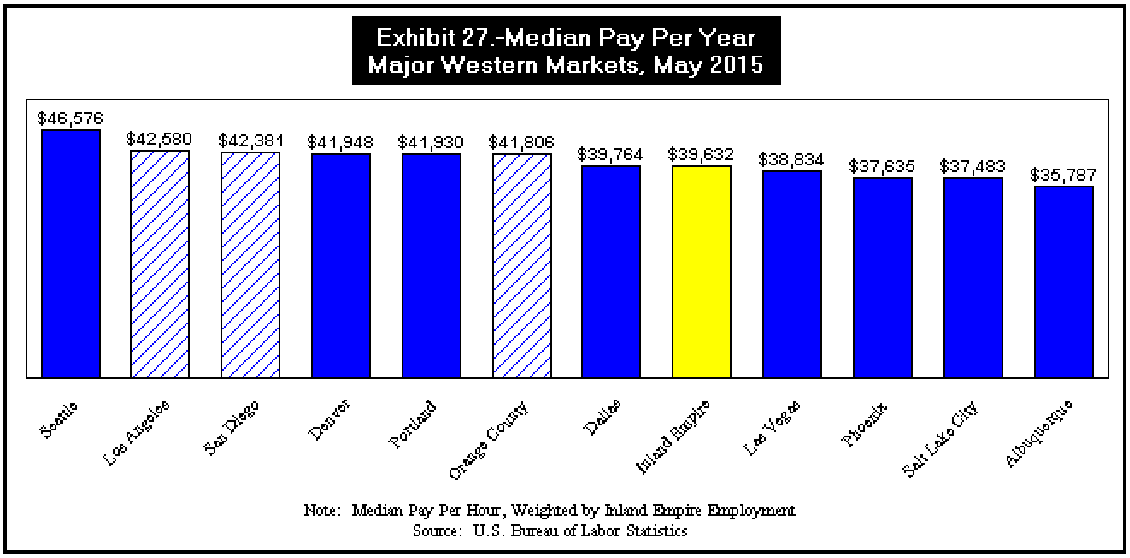
- **Forecast.** Given these facts, the prognosis for manufacturing job growth in the Inland Empire is unfortunately weak. From 2007-2011, the sector had a net loss of -33,400 jobs (*-28.2%*). With the Great Recession over, the sector has slowly grown, adding 13,205 jobs during 2012-2016 (*5.6% share*) taking it to 98,078. This included 2,797 jobs in 2016 (*2.9%*). That is still -20,169 or -17.0% below its 2007 pre-recession level of 118,533. Forecasting at 2.9%, the sector would add another 2,879 jobs in 2017 taking it to 101,243 jobs (*Exhibit 26*).



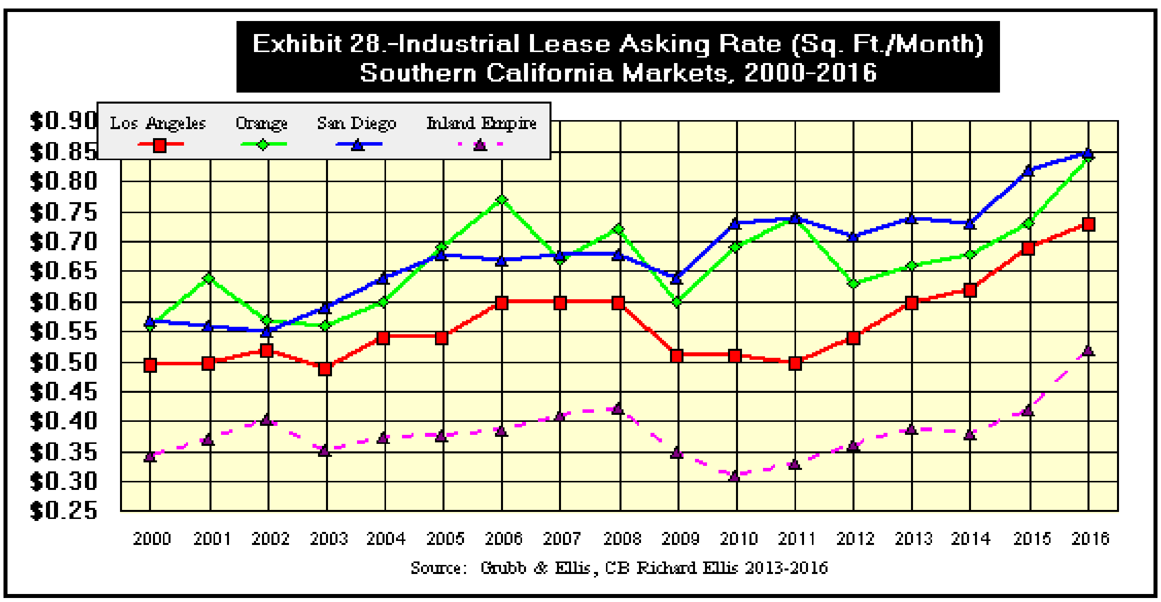
In talks with executives, it is difficult to find a scenario that will improve what should be a strong Inland Empire sector, given its competitive space and labor costs. Here, a typical response came from a major local aerospace manufacturer. Their processes require precision work by small machine shops that should be located nearby. Instead, they remain scattered throughout Southern California because owners are unwilling to move for fear it would invoke dealing with AQMD.

Caution. There is a remote scenario under which the manufacturing sector could expand faster. This is because of the competitive advantages the sector does have vis-à-vis the balance of Southern California. Two factors illustrate this:

- **Lower Median Pay.** In May 2015, the median pay for all Inland Empire occupations was $39,632 an hour. Compared to the coastal counties that was a bargain: Los Angeles (*$42,580; 7.4% higher*), San Diego (*$42,831; 6.9% higher*), Orange (*$41,806; 5.5% higher*). For consistency, the pay for each occupational group in each area was weighted by the number of jobs in that group in the Inland Empire (*Exhibit 27*). The differentials are logical given that 21.6% of the workforce commuted outside the area in 2009-2013 and will tend to work for a little less to avoiding having to do so.



- **Low Space Cost.** In third quarter 2016, industrial space in the Inland Empire leased for $0.52 per square foot. Space in the coastal counties has always cost significantly more, though differences have narrowed recently. Currently, the savings are: Los Angeles (*$0.73; 32.7% higher*), Orange (*$0.84; 40.4% higher*), San Diego (*$0.85; 57.7% higher*) (*Exhibit 28*).



These competitive advantages may still allow some manufacturing growth in the Inland Empire. In any case, it will be subdued. This is particularly true given the lower worker pay scales in most nearby metropolitan areas in other states.

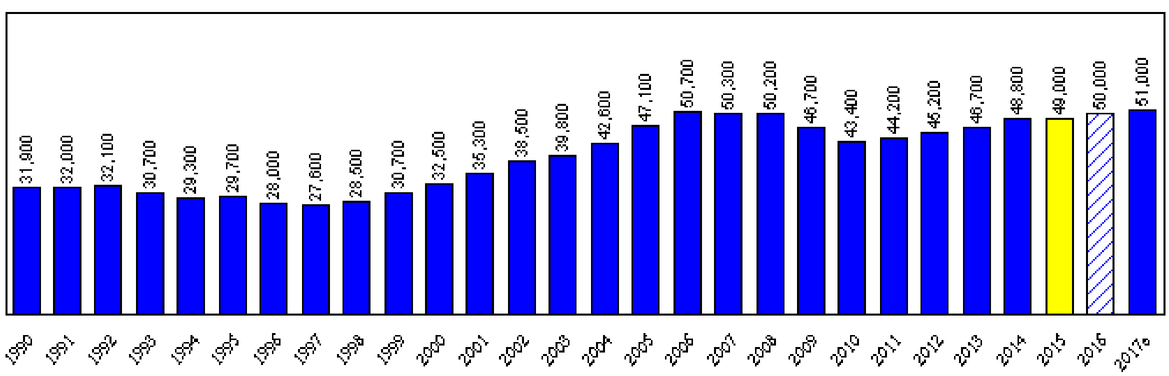
6. **Professional, Management, & Scientific Work.** Recently, another potential sector could start driving the Inland Empire's economic base. This is the combination of high-end professional, scientific, technical and management companies (*Exhibit 29*). From 2011 through 2016, they are on pace to add 6,559 jobs. This includes growth of 1,000

jobs (*2.0%*) in 2016 bringing the total to 49,978. Based upon that expansion, it is estimated that growth in 2017 will add another 1,021 positions (2.0%) to bring the group to 51,030 jobs. That exceeds the pre-recession high of 50,700 by 1.5%.

This growth potential has been aided by the fact that there has been a serious migration of well educated workers into the western edge of the Inland Empire near Los Angeles and Orange counties. There have been similar movements out of San Diego County in to the Temecula-Murrieta area. The Redlands-Loma Linda area has also attracted such activity to the location of ESRI, the University of Redlands and Loma Linda University Medical Center (*Exhibit 11, above*).

Traditionally, the edge areas of Southern California have seen the migration of first workers followed later by their employers as housing prices and the availability of land have dictated the pattern of worker migration. The Inland Empire has reached a point in its development that this is occurring for well paid workers due to the absence of affordable upscale housing elsewhere in Southern California. Also, these sectors should be growing as the recession has ended and professionals need to migrate inland to support the housing sector and to serve the 4.49 million people and 103,586 firms in the region. Given Southern California's traffic condition, it will become increasingly difficult to do so from coastal county offices.

Exhibit 29.-Professions & Management Firms
Inland Empire, 1990-2017e



2016 based upon growth rate first nine months growth
Source: CA Employment Development Department, Economics & Politics, Inc. Forecast

7. **Other Sectors.** It is difficult to see any other sectors driving the Inland Empire's economic base in a major way because of the educational level of the great mass of the area's labor force. Ultimately, there will be significant growth in population-serving sectors like retailing and eating and drinking, but that will be a reaction to the funds flowing inland because of the expansion of the sectors discussed above. Also, there will be growth in sectors related to construction once that sector reemerges. That is the case because its growth will impact finance, insurance, and real estate activity. But again, these are not fundamentally the part of the region's economy bringing fresh dollars into it.

III. Occupational & Industry Pay

A. Occupational Forecasts from EDD

1. From 2012-2022 EDD forecasts that 481 Inland Empire occupations will expand. They will add 247,150 jobs. Assuming full time work, they will have weighted annual median pay of $41,584 at 2016 levels.

2. 42 of these occupations will each add 1,500 or more jobs accounting for 146,100 or 59.1% of the forecasted gain in growing sectors (*Exhibit 32*).

    - Assuming full time work at 2,080 hours a year, the largest share of the 42 occupations will pay from $20,000 to $29,999 (*40.5%*) (*Exhibit 30*).

Exhibit 30.-Income Levels, 2012-2022 Sectors of 1,500 Job Growth or More		
Income Level	**Occupations**	**Share**
Under $20,000	1	2.4%
$20,000-29,999	17	40.5%
$30,000-$39,999	10	23.8%
$40,000-$49,999	5	11.9%
$50,000-$79,999	5	11.9%
$80,000 & Up	4	9.5%
Totals	**42**	**100.0%**

    - 78.6% of these 42 occupations will require a high school education/QED (*40.5%*) or less than high school completion (*38.1%*).

    - 25 of the 47 occupations (*59.5%*) currently require no experience or short term on-the-job training.

    - Of the 146,300 gains predicted by EDD in the 47 occupations adding 1,500 or more jobs, the breakdown was (*Exhibit 31*):

Exhibit 31.-Sectors & Job Growth, 2012-2022 Sectors of 1,500 Job Growth or More				
Sectors	**Job Growth**	**Share**	**Occupations**	**Share**
Logistics	29,370	20.1%	10	23.8%
Construction	26,240	18.0%	6	14.3%
Food & Drink	24,040	16.5%	6	14.3%
Personal Services	16,010	11.0%	1	2.4%
Business Services	14,320	9.8%	5	11.9%
General	13,200	9.0%	6	14.3%
Retail	10,670	7.3%	2	4.8%
Health Care	10,190	7.0%	5	11.9%
Education	2,060	1.4%	1	2.4%
Totals	**146,100**	**100.0%**	**42**	100.0%

Exhibit 32.-Occupations with1,500 or More Job Growth, Inland Empire, 2012-2022									
SOC Code	Occupational Title	2012	2022	Growth	Median Annual	Entry Level Education	Work Experience	On-the-Job Training	Main Sector
399021	Personal Care Aides	27,620	43,630	16,010	$21,112	Not high school	None	ST OJT	Personal Services
537062	Laborers and Freight, Stock, and Material Movers, Hand	35,070	45,270	10,200	$25,646	Not high school	None	ST OJT	Construction
353021	Combined Food Preparation and Serving Workers, Including Fast Food	29,130	38,760	9,630	$20,072	Not high school	None	ST OJT	Food & Drink
412031	Retail Salespersons	47,570	55,890	8,320	$22,027	Not high school	None	ST OJT	Retail
533032	Heavy and Tractor-Trailer Truck Drivers	24,660	30,670	6,010	$47,320	Postsecondary	None	ST OJT	Logistics
472061	Construction Laborers	12,310	18,180	5,870	$35,568	Not high school	None	ST OJT	Construction
412011	Cashiers	35,080	40,110	5,030	$20,280	Not high school	None	ST OJT	Logistics
353031	Waiters and Waitresses	19,070	23,600	4,530	$20,987	Not high school	None	ST OJT	Food & Drink
472031	Carpenters	9,610	14,030	4,420	$45,573	High school /GED	None	APP	Construction
111021	General and Operations Managers	18,570	22,770	4,200	$90,501	Bachelors	<5 years	None	Logistics
291141	Registered Nurses	23,430	27,190	3,760	$95,472	Associates	None	None	Health Care
439061	Office Clerks, General	27,140	30,690	3,550	$31,907	High school /GED	None	ST OJT	General
352014	Cooks, Restaurant	10,130	13,670	3,540	$23,982	Not high school	<5 years	MT OJT	Food & Drink
436014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	16,210	19,700	3,490	$38,168	High school /GED	None	ST OJT	Business Services
373011	Landscaping/Grounds Keeping Workers	16,620	19,710	3,090	$23,712	Not high school	None	ST OJT	Business Services
372011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	17,750	20,810	3,060	$27,102	Not high school	None	ST OJT	Business Services
434051	Customer Service Representatives	13,400	16,270	2,870	$35,069	High school /GED	None	ST OJT	Logistics
414012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	10,570	13,200	2,630	$55,827	High school /GED	None	MT OJT	Logistics
351012	First-Line Supervisors of Food Preparation and Serving Workers	8,620	11,230	2,610	$28,538	High school /GED	<5 years	None	Food & Drink
431011	First-Line Supervisors of Office and Administrative Support Workers	13,090	15,680	2,590	$53,477	High school /GED	<5 years	None	Business Services
433031	Bookkeeping, Accounting, Auditing Clerks	12,390	14,890	2,500	$40,726	High school /GED	None	MT OJT	General
411011	First-Line Supervisors of Retail Sales	16,560	18,910	2,350	$38,355	High school /GED	<5 years	None	Retail
435081	Stock Clerks and Order Fillers	22,050	24,220	2,170	$23,837	Not high school	None	ST OJT	Logistics
372012	Maids and Housekeeping Cleaners	11,690	13,830	2,140	$22,381	Not high school	None	ST OJT	General
339032	Security Guards	13,250	15,340	2,090	$23,338	High school /GED	None	ST OJT	Business Services
471011	First-Line Supervisors of Construction Trades and Extraction Workers	4,280	6,350	2,070	$67,538	High school /GED	?5 years	None	Construction
252021	Elementary School Teachers, Except Special Education	17,030	19,090	2,060	$77,051	Bachelors	None	I/R	Education
352011	Cooks, Fast Food	10,890	12,920	2,030	$19,843	Not high school	None	ST OJT	Food & Drink
472141	Painters, Construction and Maintenance	3,440	5,450	2,010	$39,936	Not high school	None	MT OJT	Construction
131111	Management Analysts	4,690	6,520	1,830	$75,046	Bachelors	<5 years	None	General
311014	Nursing Assistants	8,260	9,960	1,700	$28,288	Postsecondary	None	None	Health Care
352021	Food Preparation Workers	9,390	11,090	1,700	$20,197	Not high school	None	ST OJT	Food & Drink
472111	Electricians	3,920	5,590	1,670	$56,618	High school /GED	None	APP	Construction
132011	Accountants and Auditors	7,230	8,880	1,650	$68,411	Bachelors	None	None	General
533033	Light Truck or Delivery Services Drivers	8,180	9,830	1,650	$35,963	High school /GED	None	ST OJT	Logistics

493023	Automotive Service Technicians and Mechanics	7,650	9,290	1,640	$39,770	High school /GED	None	LT OJT	Logistics
319092	Medical Assistants	6,750	8,370	1,620	$28,787	Postsecondary	None	None	Health Care
436013	Medical Secretaries	5,290	6,890	1,600	$30,992	High school /GED	None	MT OJT	Health Care
537064	Packers and Packagers, Hand	9,870	11,460	1,590	$20,675	Not high school	None	ST OJT	Logistics
499071	Maintenance and Repair Workers, General	10,350	11,930	1,580	$37,773	High school /GED	None	LT OJT	Logistics
413099	Sales Representatives, Services, All Other	5,830	7,360	1,530	$44,658	High school /GED	None	ST OJT	General
292061	Licensed Practical and Licensed Vocational Nurses	6,070	7,580	1,510	$47,133	Postsecondary	None	None	Health Care

Source: Standard Occupational Code descriptions and forecasts, CA Employment Development Department

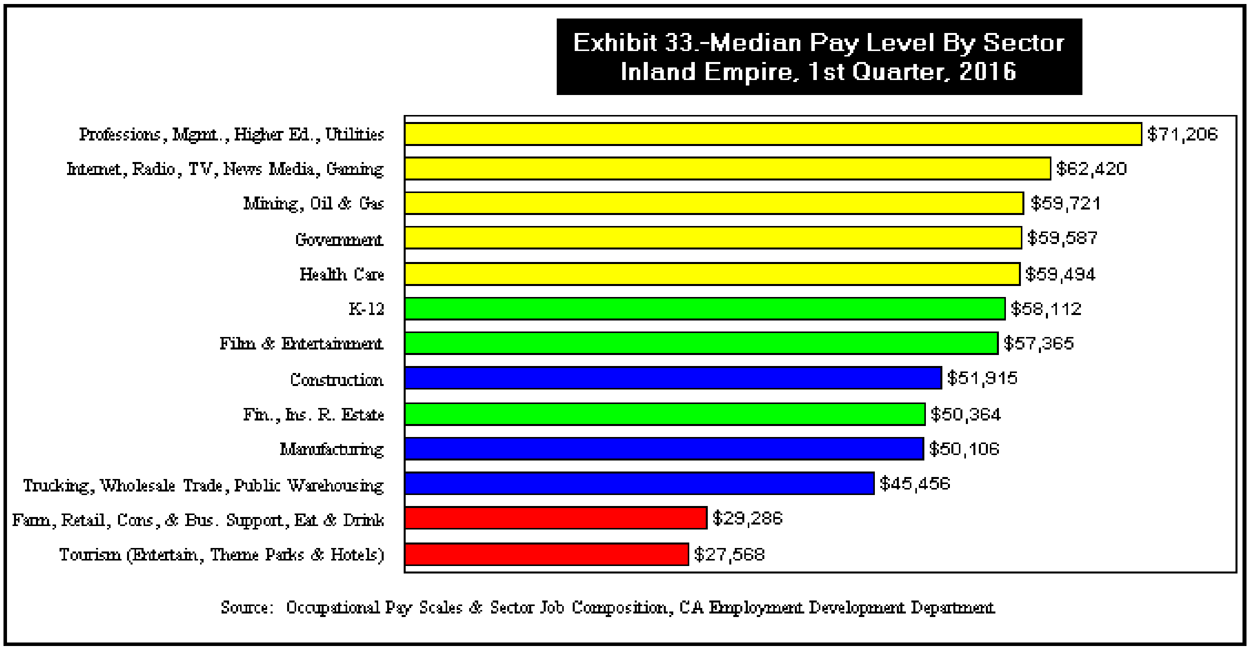
B. Median Pay by Sector

1. A key Inland Empire need is for sectors that offer primary wage earners access to middle class earnings. Three steps are needed to determine median pay by sector:

- Median pay by standard occupational code for the Inland Empire in first quarter 2015 was downloaded from EDD.
- The group of occupational codes in each sector for California was downloaded from EDD together with employment in each occupation for each sector. These data were not publically available for sectors within the state's various jurisdictions.
- The occupational array and the Inland Empire's median pay levels were combined to show the weighted array of jobs and their median pay by sector in first quarter 2016 in the inland area (*Exhibit 33*).

2. The results from this array are as follows (*Exhibit 33*):

- **High Paying Sectors (*yellow*).** The five highest paying categories had median pay levels from $59,494 to $71,206 in 2016. These included four private sector groups as well as higher education and all levels of government. They were responsible for 27,354 new jobs in the 2011-2016 recovery and expansion or 11.5% of the growth. Some jobs in these sectors offer opportunities for which the marginally educated can be trained.
- **Median Paying Sectors (*blue & green*).** Six mid-range sectors had median pay levels from $45,456 to $58,112 in 2016. They included the three essentially blue collar or technical sectors responsible for 99,197 or 41.7% of new jobs from 2011-2016. There were also two office based groups (*finance, insurance, & real estate; film & entertainment*) plus K-12 education that were responsible for 16,639 new jobs or 7.0% of the total. Marginally educated workers can succeed in these sectors.
- **Lower Paying Sectors (*red*).** Lower paying sectors had median pay levels ranging from $27,568 to $29,286. These population-serving and business servicing sectors saw 94,419 new jobs from 2011-2016 or 39.7% of the area's total growth. These sectors can help secondary wage earners move families into the middle class.



C. **Status of Sectors Requiring Lower Levels of Education.** A second Inland Empire need is for sectors that offer workers with high school or less educations the ability to start work. In 2014, substantial work was done using EDD's data to show that numerous sectors allow people to do so (*Exhibit 34*). Two are low paying but would help a family's secondary wage earner:

1. **Tourism** (*median income: $27,568*) allows 94.8% of workers to have marginal educations. While growth will be rapid, there are not many good paying jobs.

2. **Broad Group of Low Income Sectors** (*median income: $29,286*) allows 89.9% of workers to enter with high school or less schooling. These sectors will also grow rapidly but offer relatively few good paying jobs.

3. **Construction** (*median pay: $51,915*) has 84.6% of workers in jobs requiring minimal levels of formal education, though apprenticeship is necessary for many types of work. The sector is finally beginning to add employees but is having trouble finding them.

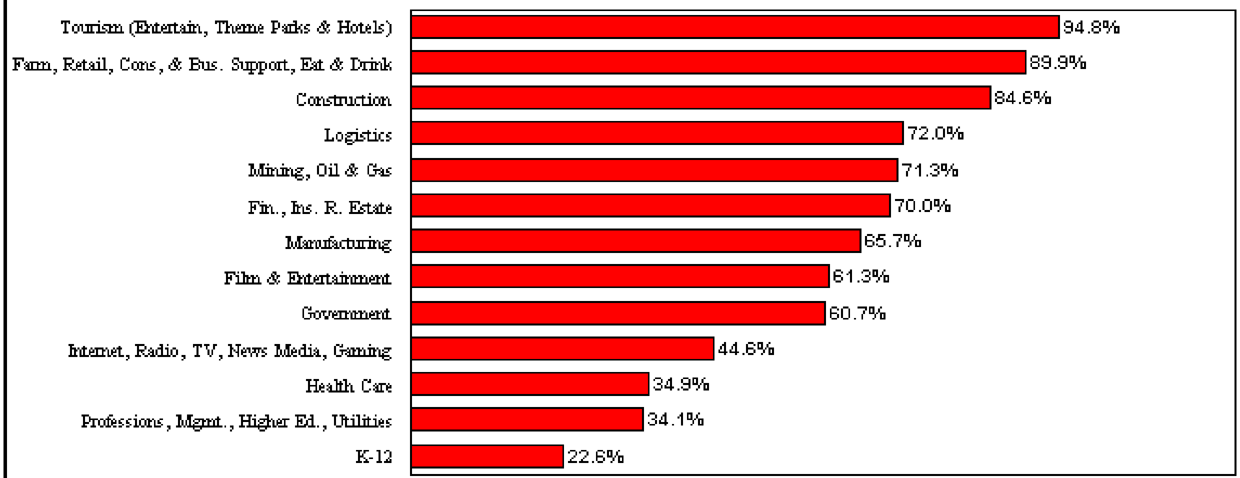
4. **Logistics** (*median pay: $45,456*) has 72.0% of its workers in jobs requiring high school or less schooling. The sector has been the fastest growing in the Inland Empire. This should continue.

5. **Finance, Insurance & Real Estate** (*median pay: $50,364*) will grow as the real estate market recovers. In this sector 70.0% of workers are in jobs requiring minimal entry level educations though many require specific state certifications.

6. **Manufacturing** (*median pay $50,106*) will offer only a little job growth. However, industry leaders indicate that a large share of their existing technicians are starting to retire. Of workers in the sector, 65.7% needed high school or less schooling. However, technical skills training is a necessity.

7. **Health Care** (*median pay: $59,464*) has a smaller share of workers in jobs with minimal educational requirements (*34.9%*). However, the sector is expected to grow rapidly, and those getting certification to work within it will often find themselves interested in moving up within the sector.

Exhibit 34.-Share of Jobs Available, High School or Less Schooling Inland Empire, 2014

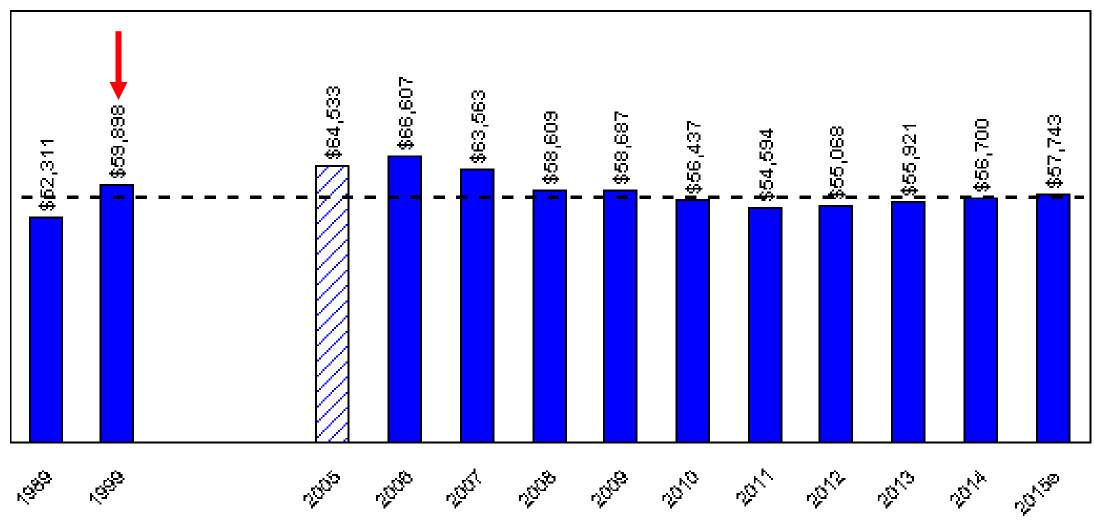


Source: Occupational Pay Scales & Sector Job Composition, CA Employment Development Department

IV. Income Trends

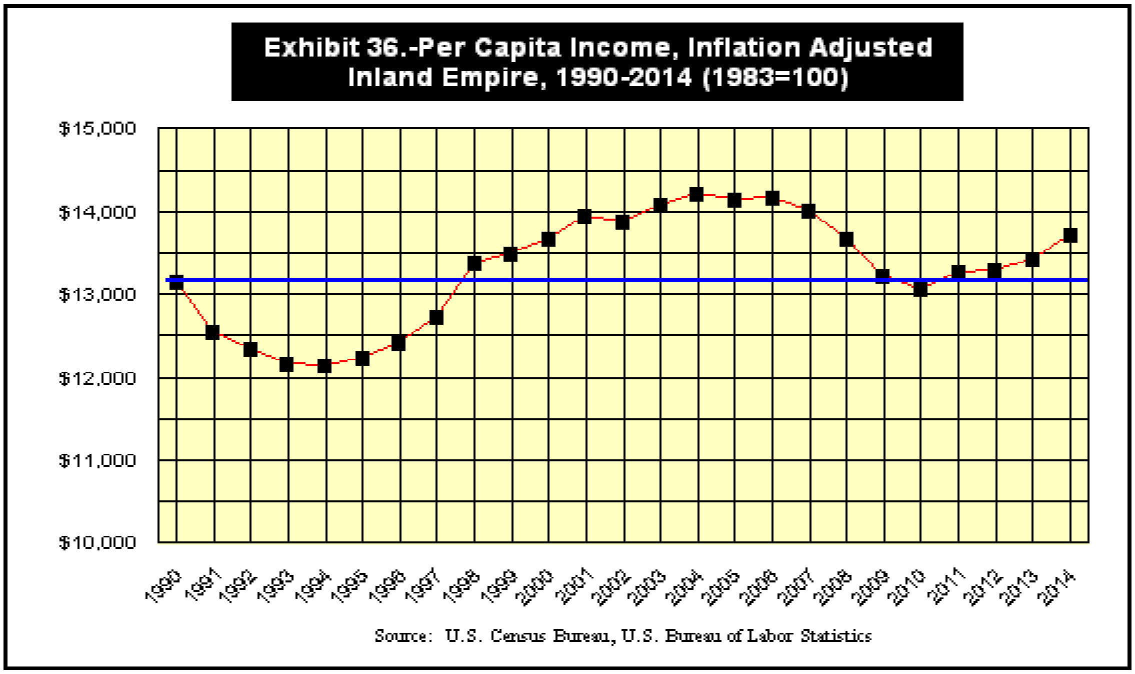
Households in the Inland Empire have generally not been seeing increased prosperity:

Exhibit 35.-Median Household Income, Inflation Adjusted Inland Empire, 1989-2015e (2015=100)



Source: U.S. Census Bureau, U.S. Bureau of Labor Statistics

A. Median Income. Median household income has retreated since 1999. Using median incomes adjusted to 2015 price levels, the 1999 level was $59,898. In the early 2000s, the trend for the Inland Empire's household purchasing power was up reaching a peak during the mortgage boom at $66,607 in 2006. That was 11.2% over the 1999 level. However, the Great Recession and its aftermath saw household purchasing power fall by 2011 to $54,594 or -8.9% below the 1999 level. Since then, there has been in a slow recovery taking the level to $57,743 in 2015, still -3.6% below the 1999 level (*Exhibit 35*).



B. Per Capita Income. The trend for the Inland Empire's per capita income adjusted to 2014 prices showed that the purchasing power of average individuals declined significantly from $13,160 in 1990 to $12,161 in 1994 (*-7.6%*) with the aerospace/defense recession (*Exhibit 36*). From there, per capita income rose to a $14,224 peak in 2004, up 15.9% from 1994. With the Great Recession, the purchasing power of an average person fell to $13,078 by 2010, off -8.1% from the 2004 peak. More recently, a gain to $13,718 by 2014 pushed per capita income to -4.9% below the 2010 level. This left it 4.2% above its 1990 level. Unfortunately, per capita income as opposed to median income has the disadvantage of being biased to the high side by people with very high incomes.

C. Income Distribution. Finally, the Inland Empire has not been immune to the imbalance in income distribution that has plagued the nation. The share of its 1,343,526 households earning under $25,000 in 2015 was 21.3% with an income share of just 4.3% (*Exhibit 37*). Another 23.3% earned $25,000-$49,999 with only a 12.2% income share. Roughly middle class households included 18.6% earning $50,000-$74,999 with 16.5% of income, and 13.3% making $75,000-$99,999 with 16.5% of income. The well-off were the 13.8% making $100,000-$149,999 with a 24.6% income share and the 9.8% earning over $150,000 with 25.9% of income. The highest earners captured a combined 50.4%.

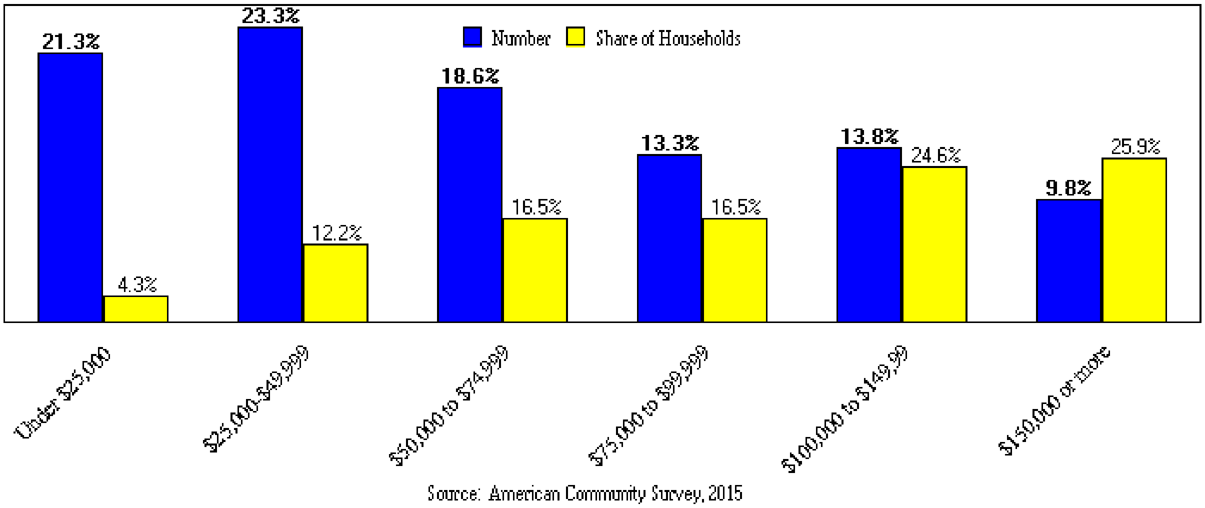


Exhibit 37.-Share of Household Income by Group
Inland Empire, 2015