

# 2013

Orange County and Southern California

## International Trade Forecast

An Overview and Analysis  
of Orange County and  
Southern California Exports

CSUF Mihaylo College  
of Business and Economics

# **International Trade Economic Forecasts**

## **An Overview of Orange County and Southern California Exports**

**By**

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<b>TABLE OF CONTENTS</b>	
	<b>Page</b>
<b>1. EXECUTIVE SUMMARY</b>	<b>1</b>
<b>2. INTRODUCTION</b>	<b>5</b>
<b>3. RECENT EXPORT TRENDS IN ORANGE COUNTY AND LOS ANGELES METRO AREA</b>	<b>6</b>
3.1 Export Trends	7
3.2 Export-related Employment Trends	8
<b>4. EXPORTS AND THE GLOBAL ECONOMY: OVERVIEW AND OUTLOOK</b>	<b>10</b>
4.1 Outlook for the global economy	11
4.2 Economic Outlook for Major Trading Partners	13
<b>5. ORANGE COUNTY: DETAILED ANALYSIS AND FORECASTS</b>	<b>15</b>
5.1 Orange County Exports	15
5.2 OC Exports by Country	19
5.3 OC Exports by Region	22
5.4 OC Exports by Sector	24
<b>6. LOS ANGELES–LONG BEACH–SANTA ANA EXPORTS</b>	<b>27</b>
6.1 Los-Angeles- Long Beach Santa Ana MSA Total Export Volume	28
6.2 Los-Angeles- Long Beach Santa Ana MSA Exports by Country	30
6.3 Los-Angeles- Long Beach Santa Ana MSA Exports by Region	33
6.4 Los-Angeles- Long Beach Santa Ana MSA Exports by Sector	35
<b>7. CONCLUSION</b>	<b>38</b>

<b>8. APPENDIX</b>	<b>Page</b>
A1. Data Sources	41
A2. Export Data	42
A3. Methodology	45
A4. Export Regions	46
A5. Orange County Exports Detailed Statistics	47
OC Export Volume by Country	47
OC Export Volume by Region	48
OC Export Volume by Sector	49
A6. Los Angeles-Long Beach-Santa Ana Exports Detailed Statistics	51
LA-LB-SA Export Volume by Country	51
LA-LB-SA Export Volume by Region	52
LA-LB-SA Export Volume by Sector	53

## 1. EXECUTIVE SUMMARY

Exports are an important source of growth for the Southern California Region. The Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area (MSA) ranked third in the nation in 2011 based on the volume of merchandise exports with total exports of \$72.6 billion, behind New York-Northern New Jersey-Long Island (ranked 1st with \$105 billion) and Houston-Sugar Land-Baytown (ranked 2nd with \$104.4 billion). As a share of the region's Gross Metropolitan Production (GMP), merchandise exports account for 9.2% of the Metro Area's gross MSA, up from 7.2% recorded in the previous year.

Orange County is a part of the broader Los Angeles-Long Beach-Santa Ana metro area and is an important part of the region's dramatic increase in exports since the recession. Merchandise exports are a vital component of the county's economy, accounting for roughly 13% of its Gross Metropolitan Product in 2011, up from 9.5% in 2010. The *IEES* estimates that after falling by -14.9% during the 2009 recession, OC merchandise exports grew by a staggering 22% in 2010 and 20.2% in 2011. Exports from the county are projected to grow at a more muted rate (of roughly 6.5%) over the next three years, reaching nearly \$30 billion by end-2014.

The leading trading partners of Orange County in 2011 were Mexico with \$5.8 billion in exports and Canada with \$2.8 billion. The next three largest recipients of the county's exports were to Asia: China (2.6 billion), Japan (\$2.0 billion), and South Korea (\$1.0 billion). While Asia remains Orange County's major trading region in 2011 accounting for 35.3% of OC merchandise exports, exports to NAFTA have increased considerably from around 25% prior to the recession to 34.8% in 2011. Orange County exports to all top five countries are projected to grow over the forecast horizon. By end-2014 merchandise exports to Mexico are estimated at \$6.8 billion, while exports to Canada are forecasted to reach \$3.4 billion. Exports to South Korea will continue to increase robustly -- following the US-Korea Free Trade Agreement --and are projected to exceed \$1.3 billion by 2014. Orange County exports to Asia and NAFTA alone are projected to increase to over \$20 billion in 2014 (\$10.3 billion to Asia and \$9.9 billion to NAFTA) with exports to these two regions exceeding the total volume of the county's exports in 2008.

The high-tech clusters of Orange County dominate exports. The top two categories continue to be Computer & Electronic Products and Transportation Equipment. In 2011, exports from Computer & Electronic Products rose to \$7.1 billion from \$5.9 registered in 2010, while Transportation Equipment jumped to \$4.2 billion from \$3.6 billion in 2010. Other key industries for OC merchandise exports include Chemical, Machinery, Petroleum & Coal Products, Food, Fabricated Metal Products and Electrical Equipment & Appliances. Projected high future global demand for high-technology and capital-intensive goods bodes well for Orange County over the forecast horizon, given its strong global comparative advantage in the production of these commodities. Exports from all sectors are projected to increase over the forecast horizon with Computer & Electronic Products topping \$8.4 billion in 2014 and Transportation Equipment reaching \$5.2 billion.

Merchandise exports for the broader Los Angeles-Long Beach-Santa Ana MSA is expected to increase over the forecast horizon, rising from \$72.6 billion in 2011 to \$84.9 billion in 2014. The export profile for the Metro Area is broadly similar to Orange County. In 2011, the top five trading partners for the region were: Mexico (\$17.7 billion), Canada (\$8.6 billion), China (\$8.0 billion), Japan (\$6.2 billion), and South Korea (\$3.1 billion). It is important to note that exports to Mexico have nearly doubled since the recession, rising from \$8.9 billion in 2009 to \$17.7 billion in 2011. Just as importantly, over this period China has surpassed Japan as the third largest destination country, with exports to China currently just a notch below those to Canada (\$8.0 billion vs. \$8.6 billion). Not surprisingly, the top two trading regions for the Los Angeles-Long Beach-Santa Ana are Asia, which commands 36.6% of total exports from the region, and NAFTA with 36.2%. Exports to all regions will increase over the forecast horizon, reaching \$31.2 billion to Asia by end-2014 and \$30.2 billion to NAFTA. The recently enacted Korea-US Free Trade Agreement (KORUS FTA) is expected to boost US exports to that country by an estimated \$11 billion over the next few years, of which roughly one quarter should come from the Los Angeles Metro region.

Computer & Electronic Products (\$21.2 billion) and Transportation Equipment (\$12.2 billion) were the top two export sectors for the region in 2011. It is important to note that there has been a



structural shift in the nature of exports in the region since the start of the recession: historically, exports in Computer & Electronic Products and Transportation Equipment have tended to be rather close -- each accounting for roughly 20% of the region's total exports. Since the end of the recession however, the balance has shifted: exports in Computer & Electronic Products have more than doubled and now comprise roughly 30% of total exports, while the export share of Transportation Equipment has fallen to around 17%. Other important exporting sectors for the broader Metro Area were Chemical, Machinery, Petroleum & Coal products, Food, Fabricated Metal Products and Electrical Equipment & Appliances. Exports in all sectors are projected to increase over the forecast horizon with Computer & Electronic Products exceeding \$24 billion by 2014 and Transportation Equipment reaching \$14.8 billion. The next five largest exporting sectors (Miscellaneous Manufacturing, Chemical, Machinery, Petroleum & Coal Products, and Food) are projected to grow to over \$24.7 billion by end-2014.

While the region's exports (both the broader MSA and Orange County) are projected to grow over the forecast horizon, the pace of growth will be slower than in 2010 and 2011. This largely reflects a global slowdown which began in 2012 and is likely to continue well into 2013. Problems are wide-ranging: some type of fiscal tightening is imminent in the US even if the "fiscal cliff" is avoided given the large structural deficit issues facing the US in the long term. The Eurozone sovereign debt crisis, while more manageable now than earlier in the year, has pushed the region deeper into a recession. Moreover, a number of emerging nations are growing at sub-par rates: China in particular is growing at its slowest pace since the height of the recession which has prompted concerns about a "hard-landing." Though we do not expect China to "hard-land", its growth path is likely to face a bumpy road over the next year and then settle at a lower growth path, around 7.5%.

Not surprisingly, the global slowdown has negatively impacted the pace of US exports in the current year. Total U.S. merchandise exports grew only by 5.1% from January to September of this year compared to the same period in 2011. Exports are expected to grow at an even slower pace for the remainder of the year and in 2013, reflecting some fiscal tightening in the US, continued downshift in the pace of growth in emerging markets, and a protracted mild recession in Europe as the region continues to

grapple with its sovereign debt crisis.

In the long-run, the overall outlook for export growth in the region is promising. The National Export Initiative (NEI) whose goal is to double U.S. total exports over the five year horizon, has shown remarkable progress. U.S. total exports rose by 16.7% in 2010 and an additional 14.2% in 2011. In response to the NEI, the Los Angeles Metro Area (along with three other metropolitan areas) moved to develop its own Metropolitan Export Initiative (MEI), which represents a close collaboration between the business community and local organizations to create and implement strategic initiatives that will help boost exports from the region. In addition, free trade agreements with Korea, Panama and Columbia -- which were approved by the U.S. Congress in October 2011-- should continue to provide support for the region's expanded role in international trade. The Korea-US free trade agreement will likely have the biggest impact in the region given that roughly 8% of total U.S. exports to South Korea originate in the Los Angeles Metro area. Longer-term, the region's exports are forecasted to increase significantly upon the successful completion of the Doha Round (the current trade-negotiation round of the World Trade Organization (WTO)) and the Trans-Pacific Strategic Economic Partnership Agreement (a free trade agreement that aims to integrate the economies of the Asia-Pacific region and the U.S.).

**Executive Summary**  
**Orange County and Los Angeles-Long Beach-Santa Ana Merchandise Exports**  
 (millions of dollars)

<b>Year</b>	<b>Orange County Export Volume</b>	<b>OC Exports Growth Rate</b>	<b>LA-LB-SA Export Volume</b>	<b>LA-LB-SA Exports Growth Rate</b>
2011	24,590	20.2%	72,689	16.9%
<b>Forecast</b>				
2012	25,565	4.0%	74,298	2.2%
2013	27,040	5.8%	77,820	4.7%
2014	29,656	9.7%	84,938	9.1%

*Source: IEES, California State University Fullerton and International Trade Administration*

## 2. INTRODUCTION

This unique report produced by the Institute for Economic and Environmental Studies (*IEES*) at California State University Fullerton, provides extensive analysis and forecasts for merchandise exports from Orange County and the Los Angeles - Long Beach - Santa Ana Metropolitan Statistical Area (MSA) by total volumes, country, region, and sectors. There are a few challenges when forecasting exports at a regional level because much of the data are unavailable and need to be estimated. For example, while the *International Trade Administration (ITA)* provides detailed export data at the national and -- to a certain extent -- at the state level, no such data are available at the county level. The closest regional data available -- also provided by the *ITA* -- cover exports from a specific Metropolitan Statistical Area (MSA). The issue is that even these data are provided for very few years covering the period from 2005 through 2011. In addition, the data are updated with long lags: for example, complete data for 2011 became available only late in 2012. An additional complication arises from the fact that the metropolitan data for the Los Angeles – Long Beach – Santa Ana MSA merges together exports from Orange County with a portion of Los Angeles County. As such, there are no specific direct trade data that measure export activity for Orange County neither contemporaneously nor from a historical perspective.

To overcome these data limitations, the *IEES* has estimated historical merchandise exports for the Los Angeles – Long Beach – Santa Ana MSA from 1990-2004 and for Orange County from 1990-2011 (the entire period). These estimates are consistent with the new methodology adopted by the U.S. Census Bureau for tracking merchandise exports by origin of movements (see Appendix A2 and A3) and are derived from an econometric model that accounts for regional, state, national and international trends. For the Los Angeles – Long Beach – Santa Ana MSA, historical export estimates are important in understanding trends and breaks in the series, especially as they relate to the business cycles. We also use statistical and econometric methodologies to recreate the entire time series of estimates for Orange County merchandise exports. The historical data are subsequently used to project exports over the next three years.

Forecasts from 2012-2014 (data for 2012 will be released in the first half of 2013) are based on statistical and econometric models using historical *IEES* estimates for the Los Angeles – Long Beach – Santa Ana MSA , *IEES* estimates for Orange County exports, regional export volumes, regional export shares, trend-growth rates, trade-weighted exchange rates, labor productivity in export-related industries, as well as U.S., foreign and local growth rates as measured by national RGDPs and MSA Gross Metropolitan Product (GMP).

### **3. RECENT EXPORT TRENDS IN ORANGE COUNTY AND LOS ANGELES METRO AREA**

The Southern California region is one of the premier global trade and distribution centers in the world due to its leading world-class ports, extensive infrastructure, large distribution and warehousing facilities, and massive local markets. The Los Angeles Custom District (LACD) ranked second in the nation in 2011 in two-way trade with a total volume of \$386.8 billion, coming slightly below the New York Custom District (with \$387.8 billion). As has been historically the case, imports dominate the international trade activity at the LACD: in 2011, the volume of imports through the custom district rose to a record-high of \$265.7 billion (up by 9.8% compared to a year earlier), while exports rose to \$121.1 billion -- another record-high representing a 15.1% increase over the previous year. The ports of Los Angeles and Long Beach continue to remain the nation's largest two ports, handling a combined 14 million TEUs (twenty-foot equivalent unit containers). Together, the two ports handle more than one third of all international container traffic in the U.S. with approximately 95% of containerized imports originating in the Pacific Rim countries. The region serves as a global warehousing and distribution center with over 474 million square feet of warehouse/distribution space in Los Angeles County, over 251.6 million square feet of industrial space in Orange County and an additional 380 million square feet of warehouse and distribution space in Inland Empire.

### 3.1 Export Trends

While two-way trade is vitally important for the Southern California economy given its extensive infrastructure and logistic operations, exports play a special role in the region's economic development and continued growth. The region has a large concentration of highly specialized service clusters (film production, entertainment and tourism, legal and consulting services, and engineering and architecture services) as well as a large manufacturing base and high concentration of high-tech industries. In terms of merchandise exports alone (which is the focus of this study), the Los Angeles – Long Beach – Santa Ana region ranked third in the nation in 2011 with total exports of \$72.6 billion, following New York-Northern New Jersey-Long Island (ranked 1st with \$105 billion) and Houston-Sugar Land-Baytown (ranked 2nd with \$104.4 billion).

The Los Angeles - Long Beach - Santa Ana MSA is by far the largest exporter of merchandise goods in California, comprising 46% of total exports from the state. Orange County is ranked third in California, with total merchandise export volumes of \$24.6 billion in 2011, coming behind the broader Los Angeles Metro Area, which includes Orange County, (with \$72.6 billion) and San Jose-Sunnyvale-Santa Clara MSA (with \$26.7 billion). The next three largest exporting metro areas in California are: San Francisco-Oakland-Fremont MSA (\$23.6 billion), San Diego-Carlsbad-San Marcos MSA (\$17.4 billion) and Riverside-San Bernardino-Ontario MSA (\$7.1 billion). The growth rates of exports from the region since the end of the recession has been spectacular: from 2009-2011, Orange County exports growth led the other MSAs in California rising by a staggering 50%, followed by San Francisco-Oakland-Fremont MSA (49.8%), and by the broader Los Angeles - Long Beach - Santa Ana MSA (41.1%). Compared to pre-recession levels, export levels in Orange County in 2011 were 25% higher than in 2008, followed by the broader Los Angeles - Long Beach - Santa Ana MSA with an increase of 21.2%. Of the top five exporting Metropolitan Areas in California, only San Jose-Sunnyvale-Santa Clara MSA exports are still currently below their pre-recession levels.

Exports account for a sizable and growing chunk of the region's Gross Metropolitan Product (GMP): they make up around 13% of Orange County's GMP (up from 9.5% recorded a year earlier) and

9.2% of the Los Angeles Metro Area GMP (up from 7.2% in the previous year). In California, San Jose-Sunnyvale-Santa Clara MSA ranks first in terms of the export share of GMP: total exports from that region to the world make up a hefty 15.3% of its GMP. This is not surprising when considering the high concentration of computer and electronic-related sectors in the region which also tend to have an oversized impact in export intensity. Overall, the Los Angeles MSA ranks fourth among California's Metro Statistical Areas in exports as percent of GMP, behind El Centro (46% of GMP), San Jose-Sunnyvale-Santa Clara (15.3% of GMP), and San Diego-Carlsbad-San Marcos (9.7% of GMP).

### **3.2 Export-related Employment Trends**

Exports play an important role in boosting employment levels both nationally and at the regional level. The Brookings Institute estimates that exports and export-related sectors (in both goods and services) supported 10.7 million jobs nationally by the end of 2010, up from 10.2 million in 2009. In California, the International Trade Administration (ITA) estimates that 5.1% of California's total private employment in 2010 (over 800,000 total jobs) were supported by exports. Export-related employment support is higher for manufacturing: over one-fifth (22.4%) of all manufacturing jobs in California depend on exports. In fact, a total of 61,894 companies exported from California in 2010, with small and medium-sized businesses making up the bulk (96%) of exporting firms.

Exports play an especially important role in Southern California, particularly for the broader Los Angeles-Long Beach-Santa Ana region given its large manufacturing base. According to the Brookings Institute, the region ranks first among all metropolitan areas in the nation in terms of jobs created and supported by exports (direct and indirect sectors). In 2010, there were 312,000 direct export-production jobs in the region and a total of 540,700 jobs when including employment in other export-related sectors (transportation, warehousing, etc.). This comprises 10.6% of total nonfarm payroll jobs, which means that more than one out of ten jobs in the region is supported -- directly or indirectly-- by exports.

The Los-Angeles-Long Beach-Santa Ana MSA is home to a large cluster of service sectors in addition to being the top ranked metro area in the nation in manufacturing. The region outperforms the

rest of the nation in exports in a few service sectors such as the film and television industry which has 10 times the number of exports-related jobs as percent of overall employment compared to the national average and generates an estimated 48,500 jobs in the area.

However, the vast majority of export-related jobs in the region are in manufacturing. Los Angeles County is home to over 14,000 manufacturing firms with Orange County housing an additional 5,170 manufacturing businesses. In 2011, these businesses supported a total of 519,000 jobs in the broader Los Angeles-Long Beach-Santa Ana MSA. Though imports also support a large employment base in the region, the vast majority of import-related jobs are in wholesale distribution of goods, followed by goods movement, logistics, freight forwarding, trade, finance, legal and accounting firms handling issues related to international trade.

Exports have aided the recovery in the nation and the region and will continue to do so over the next few years. In 2010 and 2011, exports have contributed nearly half of U.S. GDP growth (46% of total growth). In particular, exports will play an important role in boosting local employment levels: estimates show that an additional billion dollars of exports directly supports of 5,000 jobs. If indirect effects are taken into account, the number of jobs supported rises to over 9,000 for every additional billion dollar increase in exports. This is vitally important for the Southern California region: Los Angeles and Orange counties suffered tremendous employment losses during the recession, shedding a phenomenal -500,900 jobs in the span of two years, of which 104,000 were manufacturing jobs.

As the economy recovers, the labor market for the region has continued to heal gradually, thanks in large part to an unprecedented increase in exports. In fact, unemployment rates in the two-county region are currently much improved compared to the height of the recession, though still above their historical norms. The unemployment rate, which reached 13.4% in Los Angeles County and 9.8% in Orange County at the height of the recession, has currently fallen to 10.2% in LA and 7.2% in OC. This trend is expected to continue and we anticipate exports to play an important role in the continued improvement of the labor market in the region.

The Angeles-Long Beach-Santa Ana MSA is extremely well positioned to increase its global presence and boost its exports over this decade given its favorable demographics and strategic location: access to world-renown ports, favorable infrastructure, large manufacturing base, important clusters of high-tech industries, and the existence of a highly skilled and highly educated workforce particularly in Orange County.

#### **4. EXPORTS AND THE GLOBAL ECONOMY: OVERVIEW AND OUTLOOK**

The pace of growth for U.S. and regional exports is closely tied to the overall performance and outlook for the global economy. The “Great Recession” caused a collapse in world trade flows from late 2008 until the third quarter of 2009, which had a significant negative impact on export volumes for the U.S., the Los Angeles-Long Beach-Santa Ana MSA, and Orange County. U.S. merchandise exports collapsed by an unprecedented -17.9%, whereas exports from the Los Angeles Custom District dropped by an even larger -21.3%.

Trade volumes improved sharply in 2010 and 2011 as the world economy and particularly emerging markets began to recover. The early improvement was largely due to the global inventory restocking as firms began to replenish their inventories and replace outdated capital after a sharp drawdown during the recession. While an improvement in trade volumes in 2010 was expected given the collapse of 2009, the actual increase was unprecedented: U.S. merchandise exports rose by 20.6% while those from the Los Angeles Custom District (LACD) jumped by 22.1%. The pace of growth was a bit more muted in 2011: 16.9% for the U.S. with exports from LACD growing by 15%. A number of shocks affected the world economy in 2011 which led to a slower pace of exports: the European debt crisis, the natural disasters in Japan, the U.S. credit downgrade, and debt-ceiling talks in the U.S. The tsunami and earthquake in Japan interrupted supply chains across the globe and was a major contributor to lower global growth trade volumes in the second half of 2011.



#### 4.1 Outlook for the global economy

The pace of growth of the global economy slowed down perceptibly in 2012. Concerns abound in both emerging and advanced economies, with an impending slowdown of the Chinese economy, continued sovereign-debt stress from the Eurozone, and the never-ending "fiscal cliff" saga in the U.S. But perhaps the most important factor at the moment, which is currently hampering the global recovery is a pervasive increase in policy uncertainty -- particularly in the U.S. and to a lesser extent in Eurozone.

In light of these developments, we expect the global economy to grow at a 3.4% pace in 2012 and 4.0% in 2013 -- far below the 5.2% rate posted in 2010, right after the end of the Great Recession. The bulk of growth should continue to come from emerging economies with advanced economies edging forward at modest rates. In the short- and medium-term, the advanced and developing world will likely contend with different issues going forward. In the U.S., policy makers will have to come to a resolution on the fiscal cliff, a timely agreement on the debt ceiling and lay the groundwork for a credible path towards fiscal sustainability. In Eurozone, policymakers would need to follow through with tough-minded fiscal reforms while moving towards greater fiscal and banking consolidation. Emerging and developing nations will likely need to recalibrate their policies in order to deal with external shocks and sluggish growth in advanced economies which provide the bulk of demand for these nation's exports.

The crisis in the euro area poses the most serious threat to the global outlook. Meaningful progress was made during this year towards providing some stability in the area, particularly on the part of the European Central Bank which has continued to inject liquidity in the banking sector and has committed to purchase unlimited amounts of sovereign debt with maturities of up to three years from troubled countries. A framework is also in the works to establish a euro-zone banking union, with supervisory powers vested with the European Central Bank. Nonetheless, much more is needed in order for a full resolution of the region's crisis to materialize. A closer union includes further fiscal integration, pan-European deposit insurance, debt mutualization (issuance of Eurobonds), and further banking integration. More importantly, peripheral Europe needs structural reform that would liberalize labor markets, improve competitiveness and reform entitlement. These tasks are formidable and they will take a

long time. Some countries (Greece in particular) will likely exit the single-currency union, given its bleak prospects for growth under current austerity measures. Overall, we expect the Eurozone to "hang together while muddling through" in the near term, with periodic shocks from the region continuing to pose a threat to the global economy. The single-currency region is expected to remain in the midst of a mild recession well into 2013, followed by an exceptionally weak pick-up in economic activity over the next few years.

In the U.S., some form of resolution to the fiscal cliff will have to occur by end-2012 or early in 2013. We anticipate that the deal ultimately emerging from a political compromise will likely involve both spending cuts and tax increases. The Bush tax cuts will likely be extended for the middle-class but increase for higher-income households (though what qualifies as "higher-income" may be shift from \$250,000 to \$1 million). We do not expect the sequester to take effect, but rather anticipate some moderate reductions in discretionary federal outlays (both defense and non-defense), associated with some cuts in entitlement programs and a few caps in tax deductions (though these are expected to be phased in gradually). We also anticipate that the debt-ceiling will be raised early in 2013, as part of a fiscal agreement. These changes do not amount to diving off the cliff, but there is a significant amount of fiscal tightening that would shave off around 0.8% from GDP growth in 2013. Of course, policy uncertainty remains high and odds are the road to any compromise will be a lot less smooth than one would hope. The uncertainty will almost surely weigh on economic activity, particularly in the first half of 2013.

Conditions have deteriorated somewhat in emerging market economies since the second half of 2011 as domestic policy aimed at combating inflation and weakness in global demand began to weigh on growth. The Chinese economy grew by a respectable 9.2% in 2011, but the rate of growth has slowed down appreciably in the current year and is expected to cool further in 2013. More concerning, Chinese policy makers sharply downgraded the country's growth prospect for 2012 to 7.5% from an initial estimate of 8%, a move that spooked the markets and sparked concerns about a severe slowdown in the global economy. Elsewhere in the emerging world, growth has slowed down markedly: Brazil grew by a

feeble 2.7% in 2011 after a robust 7.5% in 2010, India's economy expanded by 7.4% last year compared to a stellar 9.9% in 2010, and South Korea grew by 3.6% in 2011 -- nearly half of the 6.2% pace recorded a year earlier.

The slowdown in emerging economies is expected to continue in the current year and into 2013, as weakness from Europe, and a slow recovery in the U.S. and Japan will continue to place additional strains on emerging market exports. Nonetheless, we expect emerging markets to grow over the forecast horizon given their strong domestic fundamentals, sound finances and generally healthy fiscal outlook. The Chinese economy is expected to experience a "soft-landing" and should grow at a pace around 8%, despite recent downshift in official growth estimates. The reversal of monetary policy tightening in Brazil, China, Indonesia and Thailand in response to a weakening global outlook should prove support growth in these countries. However, growth in emerging markets will come in at a lower clip than in the last two years given weaker exports to Europe, slow growth in the U.S. and other advanced economies, and efforts to rein in overheated sectors in some countries such as local property markets. Overall, we expect emerging economies to grow at a pace of 5.7% in 2012 -- below the 6.2% rate posted in 2011 and the 7.3% rate in 2010.

#### **4.2 Economic Outlook for Major Trading Partners**

**Mexico** Mexico's economy should continue to expand over the next two years despite the recent moderation in economic activity. The economy grew by a healthy 5.6% in 2010 and a more moderate 3.9% in 2011. Growth continued robustly in 2012, with real GDP increasing by 4.6% in the first quarter of 2012 and 4.1% in the second quarter. Around 78% of Mexico's manufactured products are bound for the U.S., so the fate of the Mexican economy is somewhat dependent on the U.S. outlook. In fact, economic activity in Mexico seems to have slowed down somewhat in the second half of the year, reflecting the downshift in the U.S., but we still expect the growth rate for 2012 to come at a healthy 3.8%. The economy is expected to grow at a slower clip -- around 3.6% in 2013, but return to a more robust growth of 4% in 2014.

**Canada** The Canadian economy weathered the Great Recession better than a number of the advanced economies. The ensuing recovery was also somewhat more robust in Canada than elsewhere in the advanced world, with real GDP growing by 3.2% in 2010 and 2.4% in 2011. Nonetheless, external shocks such as the U.S. fiscal cliff, a European recession, and the decline in commodity prices, has certainly weighted on the Canadian economy in 2012. These forces, and a number of internal adverse shocks such as low domestic spending, a slowing of the housing market and a decline in government outlays will likely hamper economic growth over the next two years. The Canadian economy is projected to grow by 1.9% in 2012 -- the first year over the last seven that it trails growth in the U.S.. The pace of growth is expected to be even slower in 2013 -- coming at around 1.8% -- before picking up to a more solid 2.6% in 2014.

**China** The Chinese economy performed exceptionally well after the end of the Great Recession, growing by 10.4% in 2010 and 9.2% in 2011. Economic activity slowed down perceptibly in 2012 with real GDP expanding by 8.1% in the first quarter and a much more subdued 7.6% and 7.4% rate in the second and third quarters. Clearly the recession in Europe and a weakened global demand has had a negative impact on Chinese growth. The central bank has eased rates during this year, but there has been no large-scale fiscal stimulus similar to the one in 2009 at the height of the global financial crisis. It appears that policy-makers in China are taking a more cautious stance now, having learned some lessons from the inflationary scare and potential asset bubbles that materialized after the first stimulus of four years ago. In addition, recent indicators seem to suggest that economic activity may have picked up a bit over the past few months. Real GDP growth is expected to be around 7.8% in 2012, rising to 8.2% in 2013 and 8.3% in 2014.

**Japan** The Japanese economy grew by a robust 4.5% in 2010, the first year of the recovery, but relapsed into a shallow recession in 2011 due to its triple disaster of March 2011. As expected, rebuilding efforts have been a boon for the Japanese economy, with the pick-up in economic activity beginning in the third quarter of 2011 and continuing into 2012. Going forward, the Japanese economy will contend with a few challenges: the decline in demand from China (Japan's main export destination) and the

recession in Europe will likely dampen export growth, which is one of the main sources of Japanese growth. In addition, a strengthening of the yen will also have an adverse impact on the country's exports. Survey reports indicate a worsening of manufacturer sentiment ahead of the December parliamentary elections with some of the gloom attributed to tensions with China which have significantly dampen exports. The Japanese economy is forecasted to grow by 2.2% in 2012, largely due to the rebuilding efforts related to last year's disasters. Nonetheless, the rate of growth is expected to slow to 1.4% in 2013 and to a slightly more robust 2% in 2014.

**South Korea** South Korean economy is largely dependent on exports (and has been for over five decades), so the fate of its economy is closely linked to the global economy. South Korea enjoyed spectacular growth right after the recession, growing by 6.2% in 2010 largely because of a sharp rebound in global trade volumes. It grew by only 3.6% in 2011 when the global recovery began to moderate and the European crisis started to smolder. The current slowdown in China has had a large adverse impact on the country's exports and its economic growth. South Korea is projected to grow by a tepid 2.8% in 2012, before picking up some momentum in the following two years, growing by 3.5% in 2013 and 4.1% in 2014.

## **5. ORANGE COUNTY: DETAILED ANALYSIS AND FORECASTS**

### **5.1. Orange County Exports**

Orange County is a vibrant economic area of Southern California. According to the Census Bureau its population grew by 1.5% in 2011 compared to one year ago. With over 3.1 million residents, Orange County is the 3rd most populous county in California, behind Los Angeles County and San Diego County and the 6th most populous county in the U.S. If Orange County were a separate state, it would rank 30th in the nation based on the size of its population. While Orange County is the smallest county in Southern California (798 square miles), it has a vibrant economy, producing a wide-range of goods and services. The county's Gross Domestic Product in 2011 was estimated to be \$184.6 billion, an increase of 5.7% over the previous year. Orange County ranks 15th among the nation's metro areas based on its GMP

behind Phoenix and ahead of San Diego-Carlsbad-San Marcos, and San Jose-Sunnyvale-Santa Clara. If Orange County were a separate country, it would be ranked 45th in the world based on the volume of gross production, coming ahead of Singapore which is ranked 46th.

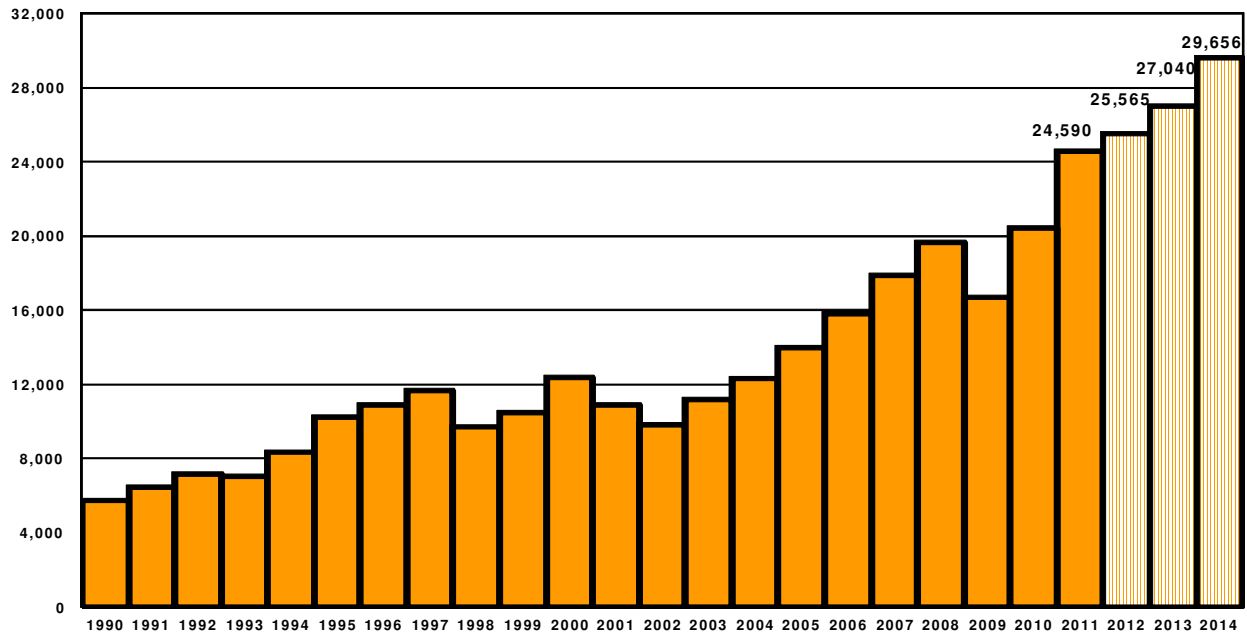
Merchandise exports continue to be an important part of the county's economy, accounting for nearly 13% of its GMP in 2011, up from an estimated 9.5% in 2010. The county ranks in the top 3.5% of MSAs (13th out of 378) based on export volumes originated in the area, having moved up one spot in 2011 compared to the previous year. In California, it ranks third in exports behind the broader Los Angeles-Long Beach-Santa Ana MSA (which includes Orange County) with \$72.7 billion, and San Jose-Sunnyvale-Santa Clara MSA with \$26.7 billion. Orange County also ranks third in California in exports as percent of GMP, behind El Centro (where exports make up 47.2% of GMP) and San Jose-Sunnyvale-Santa Clara MSA (where exports account for 15.3% of GMP). With an emphasis on high tech industry, easy access to the nation's two main ports, extensive infrastructure, and a strong capital base, the county is poised to maintain and expand its role as a major player in international trade over the next few years.

Historically, trends in Orange County exports have been broadly in line with international developments and domestic economic activity. For example, exports declined by -1.9% during the recession of early 1990s, by -12.3% in 2001 and by -9.4% in 2002 (see Figure 1 and Table 1). Exports also collapsed by -16.7% in 1998 following the Asian financial crisis of 1997 as the currencies of major trading partners in Asia Pacific (Thailand, Malaysia, Indonesia and South Korea) depreciated precipitously prompting an economic crisis in the region. The severe global recession of 2009, caused a massive -14.9% decrease in exports from Orange County as global economic activity collapsed and trade volumes shrunk.

However, demand for Orange County exports has picked up significantly, rising by 22.2% in 2010 and an additional 20.2% in 2011. In fact, Orange County regained quickly its prerecession export peak levels: by the end of 2010, exports reached a record-high of \$20.4 billion, surpassing the \$19.6 of 2008. The *IEES* estimates that Orange County merchandise exports in 2011 reached a new record-high of

\$24.6 billion -- a 25% increase over its pre-recession levels -- caused largely by the increase in world demand for the region's products especially from emerging economies.

**Figure 1**  
**OC Total Exports**  
**(millions of dollars)**



Source: IEES, California State University Fullerton

Orange County exports are projected to increase steadily over the forecast horizon (2012-2014), reaching just under \$30 billion by 2014. The pace of growth is expected to be less robust when compared to 2010 and 2011, largely because of the global slowdown, a cooling of emerging economics and policy uncertainty from the U.S. and Eurozone. Export volumes from Orange County are projected to grow by only 4.0% in 2012 -- significantly lower than the growth of over 20% growth rates posted over the past two years. Exports are expected to edge up a bit more in 2013, growing by 5.8% as some uncertainty is resolved (particularly the U.S. "fiscal cliff" and the debt-ceiling negotiations), but significant challenges remain especially for advanced economies which are likely to face continued levels of high unemployment, a still-fragile financial sector, persistent fiscal deficits, and continued fiscal austerity. While emerging markets will grow more robustly than their advanced counterparts, their demand for the

regions exports will grow at slower pace in 2012 and 2013 given the recent downshift in economic activity in these countries due to soft global demand.

**Table 1**  
**OC Total Exports**  
**(millions of dollars)**

<b>Year</b>	<b>OC Total Export Volume</b>	<b>Growth Rate</b>
<b>1990</b>	5,750	n/a
<b>1991</b>	6,461	12.4%
<b>1992</b>	7,179	11.1%
<b>1993</b>	7,044	-1.9%
<b>1994</b>	8,383	19.0%
<b>1995</b>	10,247	22.2%
<b>1996</b>	10,882	6.2%
<b>1997</b>	11,696	7.5%
<b>1998</b>	9,748	-16.7%
<b>1999</b>	10,481	7.5%
<b>2000</b>	12,402	18.3%
<b>2001</b>	10,877	-12.3%
<b>2002</b>	9,850	-9.4%
<b>2003</b>	11,191	13.6%
<b>2004</b>	12,316	10.1%
<b>2005</b>	13,961	13.4%
<b>2006</b>	15,806	13.2%
<b>2007</b>	17,897	13.2%
<b>2008</b>	19,668	9.9%
<b>2009</b>	16,739	-14.9%
<b>2010</b>	20,450	22.2%
<b>2011</b>	24,590	20.2%
<b>Forecast</b>		
<b>2012</b>	25,565	4.0%
<b>2013</b>	27,040	5.8%
<b>2014</b>	29,656	9.7%

*Source: IEES, California State University Fullerton*

Orange County will continue to benefit over the next decade from the strengthening of the global recovery. In addition, the new free trade agreements with South Korea, Panama and Columbia will provide renewed support for Orange County exports. Among these, the U.S.- Korea free trade agreement should have the largest impact in the region, given that South Korea is one of the top five trading partners



for Orange County. In addition, accommodative monetary policy in the U.S. -- which is expected to last until at least mid-2014 -- should continue to place further downward pressure on the U.S. dollar, which should further stimulate exports from the area.

## 5.2 Orange County Exports by Country

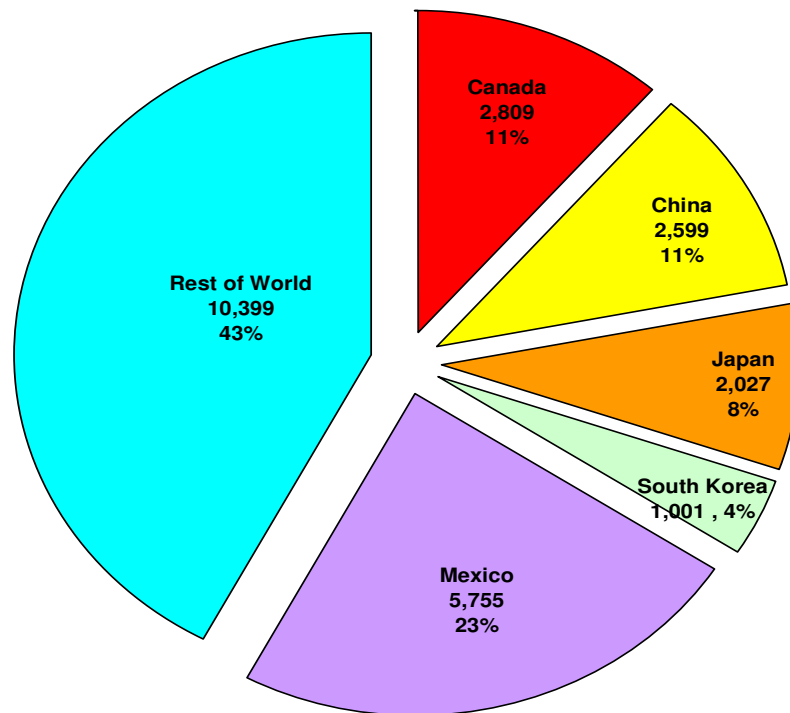
The five largest export destination countries for Orange County in 2011 were Mexico (\$5.8 billion), Canada (\$2.8 billion), China (\$2.6 billion), Japan (\$2.0 billion) and South Korea (\$1.0 billion) (see Figure 2 and Table 2). In 2011, the share of Orange County merchandise exports to these top five destination countries increased to roughly 58% from 50% recorded in 2010. The total volume of exports to these five largest trading partners increased to \$14.2 billion in 2011 -- \$2.8 billion higher than the \$11.4 billion recorded in 2010.

Mexico and Canada are the top two main destinations for Orange County exports, combining for roughly 35% of total exports in 2011. These two countries have traded places for the top two trading partners for Orange County, with Mexico being the top export destination from 2000-2004 and Canada taking the lead from 2005-2008. During the 2009 crisis, the stronger Mexican peso against the U.S. dollar boosted exports to the country and currently OC exports to Mexico have surged to an all-time high. In fact, exports from Orange County to Mexico more than doubled since the end of the Great Recession, rising from \$2.6 billion in 2009 to the current level of \$5.8 billion. The share of exports to Mexico is projected to remain above 22% over the next three years -- which means that Mexico will continue to remain the largest trading partner for Orange County over the forecast horizon. Exports to Mexico are projected to remain virtually flat in 2012 compared to the previous year (around \$5.8 billion), reaching close to \$6.8 billion by 2014.

The share of exports from Orange County to Canada continued to decline, from a cycle high of 13.8% in 2007 to 11.4% in 2011. Over the forecast horizon, the share of exports to Canada is projected to remain steady, at around 11.6% of total exports. Canada survived the recession better than the vast majority of industrialized nations and its recovery has been a bit more robust when compared to the U.S..

For example, Canada's Real GDP grew by 3.2% in 2010 and a further 2.4% in 2011, outperforming many developed economies. Not surprisingly, Orange County exports to Canada during this period were also robust growing by 17% in 2010 and an additional 14.5% in 2011. Nonetheless, much like a number of advanced economies, we expect Canada to grow at a slower pace in 2012 and 2013, which means that exports from the county to Canada will also grow at a more sluggish pace. We forecast Orange County exports to Canada to grow by 6.6% in 2012, by 4.5% in 2013 and a more robust 8.7% in 2014. Exports to Canada are projected to reach \$3.4 billion by 2014 representing a 25.5% increase compared to the 2008 levels.

**Figure 2**  
**OC Exports by Country**  
**Year 2011, millions of dollars**



Source: IEES, California State University Fullerton

Trade between Orange County and Asia -- and particularly the Pacific Rim -- has fuelled economic growth in the region. Orange County exports to China at the start of the decade were around \$0.2 billion or 2.3% of total Orange County volume, but they have expanded by nearly twelve times by the end 2011. In 2011, exports to China were \$2.6 billion which now represents 10.6% of total Orange

County's exports. For South Korea, trade volumes at the start of the decade came up to only \$0.4 billion (3.8% of total volumes). By 2011, exports to South Korea are estimated to account for \$1.0 billion, or 4.1% of total Orange County volumes. Exports to South Korea are projected to grow faster than any other major trading partner over the forecast horizon, aided particularly by the U.S.- Korea Free Trade Agreement. Since more than one third of the nation's trade with South Korea is through the Los Angeles Custom District (LACD), Orange County is well positioned to increase its exports and establish an important presence in South Korea -- the world's 12th largest economy.

The major trading partners' economies are expected to expand over the forecast horizon (though at a slower rate than in the previous two years) which should increase Orange County merchandise exports to its top five countries. Even though growth in trade volumes will likely be more muted over the short-term (1-2 years) relative to the spectacular rates recorded in the first two years of the recovery,

**Table 2**  
**OC Exports by Country**  
**(millions of dollars)**

<b>Year</b>	<b>Canada</b>	<b>China</b>	<b>Japan</b>	<b>South Korea</b>	<b>Mexico</b>	<b>Rest of World</b>	<b>Total Exports</b>
<b>1999</b>	1,304	220	1,262	401	1,232	6,062	10,481
<b>2000</b>	1,617	359	1,821	623	1,684	6,299	12,402
<b>2001</b>	1,367	484	1,655	475	1,601	5,294	10,877
<b>2002</b>	1,065	447	1,087	391	1,461	5,400	9,850
<b>2003</b>	1,180	560	1,119	415	1,318	6,598	11,191
<b>2004</b>	1,385	752	1,348	541	1,476	6,815	12,316
<b>2005</b>	1,628	929	1,470	614	1,556	7,764	13,961
<b>2006</b>	1,816	1,335	1,525	679	2,067	8,385	15,806
<b>2007</b>	2,476	1,676	1,638	881	1,831	9,395	17,897
<b>2008</b>	2,711	1,756	1,779	1,007	2,329	10,086	19,668
<b>2009</b>	2,097	1,461	1,486	793	2,630	8,273	16,739
<b>2010</b>	2,454	1,980	1,692	925	4,324	9,076	20,450
<b>2011</b>	2,809	2,599	2,027	1,001	5,755	10,399	24,590
<b>Forecast</b>							
<b>2012</b>	2,995	2,588	2,122	1,121	5,715	11,023	25,565
<b>2013</b>	3,129	2,804	2,216	1,180	6,122	11,589	27,040
<b>2014</b>	3,401	3,126	2,418	1,292	6,801	12,617	29,656

*Source: IEES, California State University Fullerton*

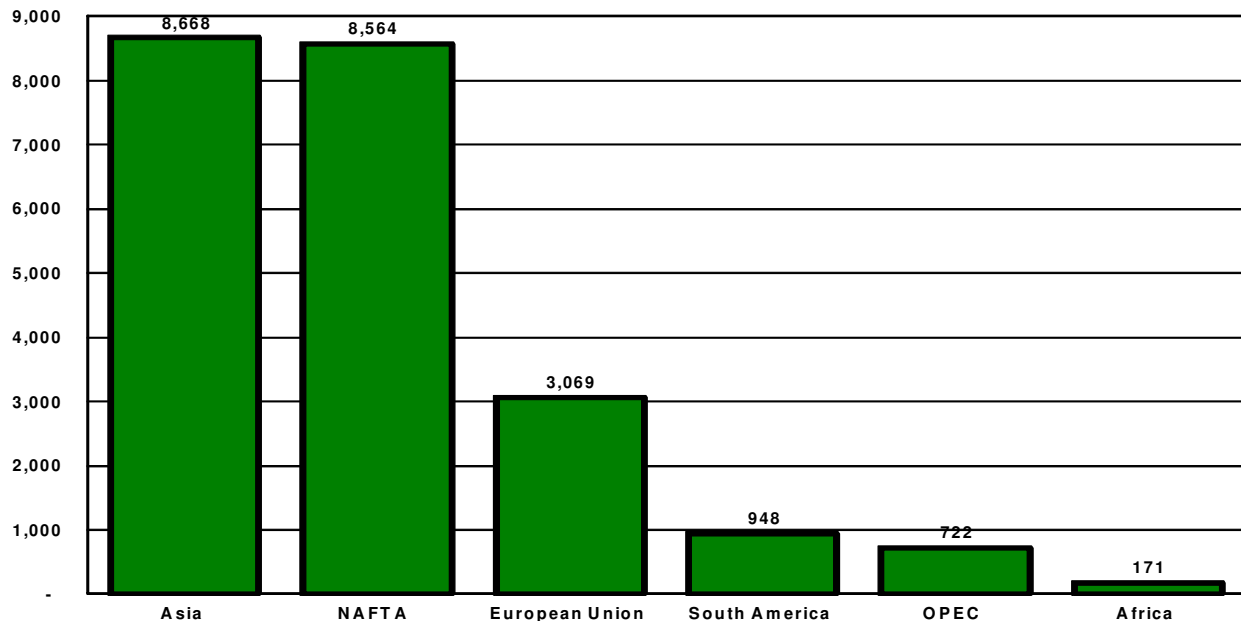
exports are projected to grow across all major trading partners. From 2011-2014, exports to South Korea

are expected to grow the most (29.1%), followed by exports to Canada (21.1%), China (20.3%), Japan (19.3%), and Mexico (18.2%).

### 5.3 Orange County Exports by Region

The top three global regions for Orange County exports are Asia, NAFTA and the European Union. In 2011, all three regions combined for over 82.6% of total exports from the county to the world. Asia remains the top trading partner for the region, going as far back as early 1990s, with NAFTA coming a close second. The global financial meltdown of 2009 caused exports to Asia to decline by -15.1% from a record-high of \$6.7 billion in 2008. Exports to the region have rebounded by a healthy 53% over the past two years, reaching an all time-high of \$8.7 billion in 2011 and accounting for 35.3% of total volumes (see Figure 3 and Table 3). Exports to NAFTA have grown the most since the end of the recession (81%) with exports in 2011 reaching \$8.6 billion (34.8% of total exports). Exports to the

**Figure 3**  
**OC Exports by Region**  
**Year 2011, millions of dollars**



Source: IEES, California State University Fullerton

European Union took a bit longer to recover given the turmoil in the euro area, marginally surpassing their pre-recession levels in 2011 with \$3.1 billion (12.5% of total exports). Exports from Orange County to South America, OPEC and Africa combined for a total of \$1.8 billion in 2011 (7.5% of total exports).

In terms of growth rates, since the end of the recession exports to NAFTA grew by an astounding 43.4% in 2010 followed by a hefty 26.4% in 2011. Exports to the European Union collapsed by -19.6% during the deep recession of 2009, but recovered only by a tepid 4% in the first year of the recovery as the Eurozone began grappling with its sovereign debt crisis. Exports to South America increased by 36.9% in 2011 following the 30.2% increase in 2010 as this region recovered from the global recession. The *IEES* estimates that in 2011, export volumes from Orange County to Asia grew by 24.9%, and to the European Union by 22.5% as economic expansion continued in the Pacific Rim countries and Europe took important steps to address its fiscal crisis.

Over the forecast horizon, the *IEES* projects an increase in OC merchandise exports to the major regions for most years. Export growth to the European Union is expected to be weaker than in other regions increasing by 2.5% in 2013 and a more robust 10.0% in 2014, reflecting the long-term structural challenges that the region will likely continue to face in the foreseeable future. Exports to Asia are expected to grow at a slower pace -- only 5.9% in 2013 reflecting a slowdown in the region before reaccelerating to 10.0% in 2014. Exports to NAFTA are projected to increase by 8.8% in 2013 and 9.9% in 2014 following a -3.1% decline in 2012. While the strong recovery in the South American economies boosted export demand in 2011, exports are projected to decline in 2012 before accelerating again by 7.6% in 2013 and 11.3% in 2014.

**Table 3**  
**OC Exports by Region**  
 (millions of dollars)

<b>Year</b>	<b>Africa</b>	<b>Asia</b>	<b>European Union</b>	<b>NAFTA</b>	<b>OPEC</b>	<b>South America</b>
<b>1999</b>	68	3,049	1,723	2,428	187	281
<b>2000</b>	63	4,358	2,211	3,230	186	286
<b>2001</b>	63	3,867	1,946	2,857	148	270
<b>2002</b>	58	2,956	1,453	2,387	129	178
<b>2003</b>	65	3,085	1,486	2,374	135	166
<b>2004</b>	87	3,969	1,818	2,829	191	251
<b>2005</b>	103	4,501	1,992	3,184	341	311
<b>2006</b>	137	5,138	2,120	3,883	299	389
<b>2007</b>	127	6,136	2,624	4,307	446	502
<b>2008</b>	181	6,662	2,998	5,040	535	714
<b>2009</b>	180	5,654	2,410	4,727	447	532
<b>2010</b>	156	6,941	2,506	6,777	568	692
<b>2011</b>	171	8,668	3,069	8,564	722	948
<b>Forecast</b>						
<b>2012</b>	214	8,847	3,345	8,302	722	901
<b>2013</b>	209	9,368	3,427	9,037	770	969
<b>2014</b>	228	10,303	3,771	9,930	848	1,079

*Source: IEES, California State University Fullerton*

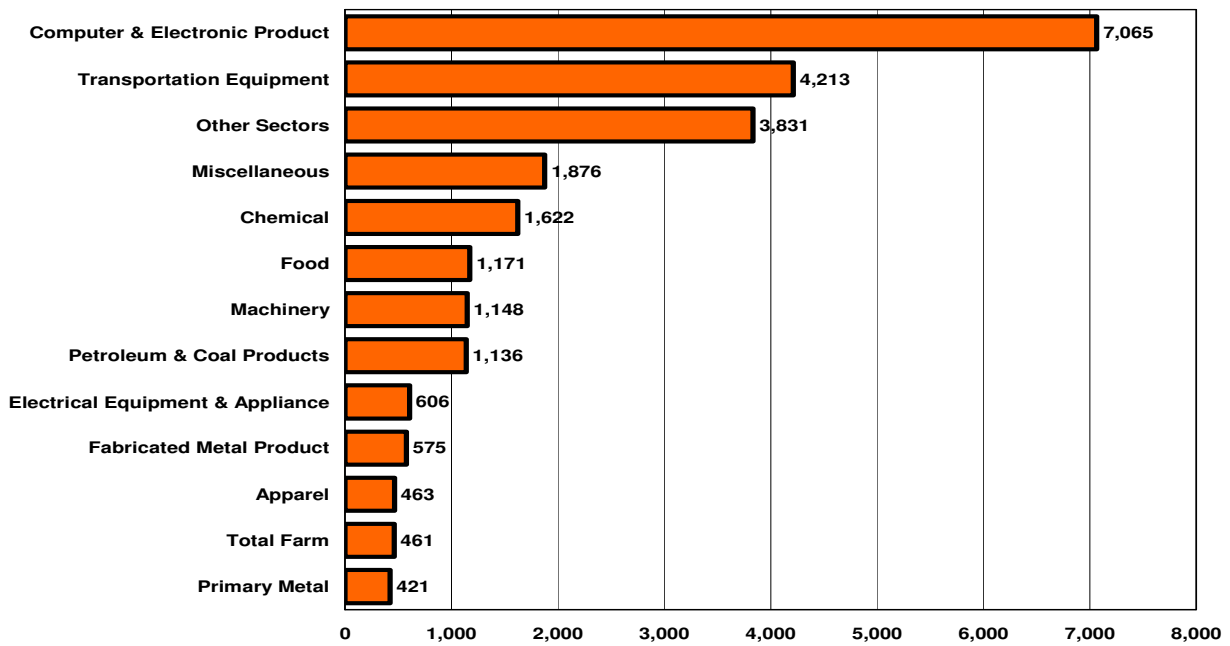
#### 5.4 Orange County Exports by Sector

High-tech industries dominate the profile of Orange County exports. These high-tech sectors are important for the county's economy: not only do they support a large base of employment and output, but they also make up a large percentage of merchandise exports from the county. Orange County exports are dominated by two main sectors: Computer & Electronic Products and Transportation Equipment. In 2011, Computers & Electronic Products made up 28.7% (\$7.1 billion) of the county's total exports with Transportation Equipment coming in second at 17.1% (\$4.2 billion) (see Figures 4 and Table 4). Together, the two sectors combine for almost half (45.8%) of the county's total exports. The next 3 largest exporting industries combine for 19.0% of total exports and are in the following sectors: Miscellaneous Manufacturing (\$1.9 billion), Chemical (\$1.6 billion), and Machinery (\$1.1 billion). Other key industries for OC merchandise exports include Petroleum & Coal Products, Food, Fabricated Metal Products, and Electrical Equipment & Appliances.

Exports increased significantly across almost all sectors in 2011. Exports in Computer &

Electronics grew by 18.4% over the previous year, Transportation Equipment by 16.9% and Miscellaneous Manufacturing grew by an astounding 30.7%. While Petroleum & Coal Products account for only 4.6% of OC exports, shipments abroad from this sector grew by 70% in 2011 compared to 2010.

**Figure 4**  
**OC Exports by Sector**  
**Year 2011, millions of dollars**



Exports are projected to grow for most sectors during the forecast horizon. Exports in Computer & Electronics are projected to increase by a total of 18.4% over the 3-year forecast horizon, reaching \$8.4 billion by the end of 2014. Transportation Equipment is also projected to grow by roughly 24% over the next three years, reaching \$5.2 billion in 2014. It is important to note that exports in this sector have not yet reached their pre-recession peak of \$4.5 billion recorded in 2008, but are projected to do so by the end of 2012. After experiencing an incredibly strong growth rate in 2011, exports in Petroleum & Coal Products are expected to decline in 2012 before increasing by a more moderate rate of around 7.2% in 2013 and a stronger 12.5% in 2014. Food Manufacturing exports are forecasted to remain relatively flat in 2012 but grow by 6.9% in 2013 and 10.0% in 2014. Projected high future demand for high-technology and capital-intensive products bodes well for Orange County in the long term, given its strong global competitive advantage in the production of these commodities.

**Table 4**  
**OC Exports by Sector**  
 (millions of dollars)

Year	Transportation	Computer & Electronic	Miscellaneous	Chemical	Machinery	Petroleum & Coal	Food
	Equipment	Products				Products	
1998	2,218	3,002	418	427	513	131	282
1999	2,091	3,143	446	442	509	135	301
2000	2,084	4,177	525	546	824	186	347
2001	2,111	3,457	584	611	729	199	405
2002	1,787	2,774	589	647	646	173	376
2003	2,133	2,677	636	728	673	167	440
2004	2,871	3,194	740	793	868	192	458
2005	3,226	3,177	871	821	953	314	510
2006	3,225	3,779	1,010	975	956	349	600
2007	3,584	3,924	1,157	1,236	1,017	454	671
2008	4,514	3,614	1,393	1,265	1,160	981	818
2009	3,342	3,827	1,202	1,182	975	568	698
2010	3,606	5,966	1,435	1,353	1,062	669	929
2011	4,213	7,065	1,876	1,622	1,148	1,136	1,171
<b>Forecast</b>							
2012	4,563	7,079	1,881	1,712	1,293	1,015	1,170
2013	4,757	7,652	1,993	1,798	1,343	1,088	1,251
2014	5,213	8,363	2,200	1,973	1,463	1,224	1,376

Year	Fabricated	Electrical	Apparel	Total Farm	Primary	Other	Total
	Metal	Equipment & Appliances			Metal	Sectors	Export Volume
1998	301	280	231	125	170	1,650	9,748
1999	271	299	239	131	126	2,345	10,481
2000	301	423	276	165	172	2,376	12,402
2001	400	345	315	174	159	1,387	10,877
2002	337	338	303	229	146	1,505	9,850
2003	368	342	275	237	169	2,346	11,191
2004	428	410	282	250	191	1,639	12,316
2005	483	460	343	266	244	2,295	13,961
2006	576	543	362	312	285	2,834	15,806
2007	615	561	363	336	308	3,672	17,897
2008	589	552	384	381	359	3,657	19,668
2009	506	449	406	318	288	2,977	16,739
2010	583	499	424	393	349	3,182	20,450
2011	575	606	463	461	421	3,831	24,590
<b>Forecast</b>							
2012	673	639	524	484	438	4,094	25,565
2013	700	670	542	512	463	4,271	27,040
2014	757	736	591	561	508	4,691	29,656

Source: IEES, California State University Fullerton



## 6. LOS ANGELES–LONG BEACH–SANTA ANA EXPORTS

The Los-Angeles- Long Beach Santa Ana MSA is the 13th most populous Metro Area in the world, the 1st most populous in California and the 2nd most populous in the U.S. (behind New York-Northern New Jersey-Long Island) with over 12 million residents. If Los-Angeles- Long Beach Santa Ana MSA were a separate state, it would rank 6th in the nation (ahead of Pennsylvania) based on the size of its population. The MSA is ranked 2nd in the nation based on the size of its economy with a gross metropolitan product (GMP) of \$755 billion in 2011. Its GMP grew by 3.9% in 2011, above the national rate of 1.8%. If the Los-Angeles- Long Beach Santa Ana MSA were a separate country, it would be ranked 17th in the world based on its GMP volume, behind the Netherlands and ahead of Turkey, Indonesia, and Switzerland. Orange County is part of the larger Los-Angeles- Long Beach Santa Ana MSA and its population and output contribute significantly to the area's economic growth and development.

Exports are a very important source of growth for the Los-Angeles- Long Beach Santa Ana MSA accounting for about 9.2% of the Gross Metropolitan Product. The Metro Area ranks 3rd in the nation in terms of merchandise exports with a total of \$72.7 billion, coming behind the New York-Northern New Jersey-Long Island MSA with \$105 billion and Houston-Sugar Land-Baytown MSA with \$104 billion. The Los-Angeles Metro Area ranks first in California based on total export volumes produced in the region, far outpacing other Metro Areas in California and accounting for roughly 46% of the entire export volumes from the state in 2011. The MSA ranks 4th in California in exports as percent of GMP (9.2% of GMP) behind El Centro MSA (46% of GMP), San Jose-Sunnyvale-Santa Clara MSA (15.3% of GMP) and San Diego-Carlsbad-San Marcos MSA (9.7% of GMP). With direct access to the nation's two main ports, extensive infrastructure, strong manufacturing base, massive distribution and warehousing centers, and a mature capital base, the area should be able to dominate in international trade over the forecast horizon.

The *International Trade Administration (ITA)* reports total merchandise exports for the Los Angeles - Long Beach - Santa Ana region only for the most recent years -- 2005 through 2011. While the

export data for the latest three years includes a breakdown of exports by region, country (top 50), and sector (top 30), considerably less details are available in 2005, 2006, and 2007. No export data are available for the period preceding 2005.

The *IEES* provides historical estimates prior to 2005 which are derived from an econometric model that accounts for trends in regional, state, national and international trade patterns. These estimates are consistent with the new methodology adopted by the U.S. Census Bureau for tracking merchandise exports (see Appendix A2 and A3). Forecasts for 2012-2014 are based on statistical and econometric models using historical estimates for the region's exports, state and national export volumes, trade-weighted exchange rates, labor productivity in export-related industries, as well as U.S. and foreign by real GDP growth rates.

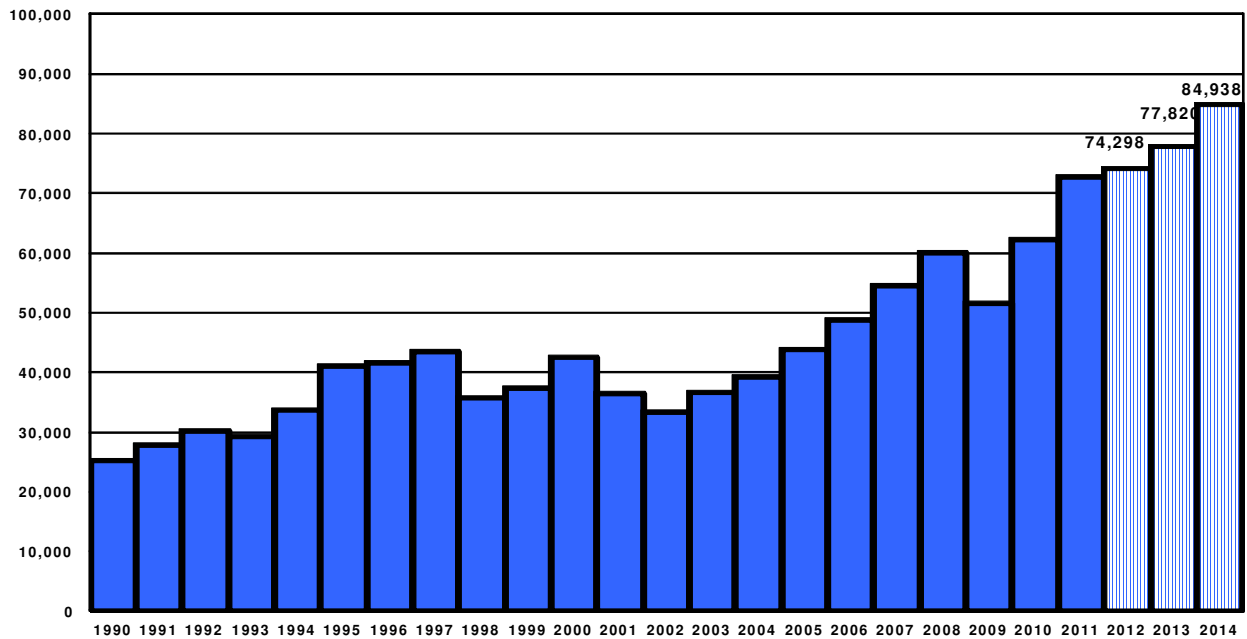
### **6.1 Los-Angeles- Long Beach Santa Ana MSA Total Export Volume**

Export volumes for the Los-Angeles- Long Beach Santa Ana MSA increased by a total of \$10.5 billion in 2011 reaching \$72.6 billion by end-2011. This represents a 16.9% increase compared to 2010. This is the second year of export growth following the record 20.6% growth in 2010. This is in stark contrast to the historical pattern: average export growth over the 2000-2008 period is estimated to be just 5.9%. In fact, even if we exclude the recession of early 2000s and concentrate on the boom years (2003-2008) average annual growth rate in exports is still far below that of the most recent two years, coming only at around 10.3%. Export volumes are closely related to business cycle developments, with deteriorations in trade volumes occurring during periods of economic downturns. Despite these cycle declines, the Los-Angeles- Long Beach Santa Ana MSA exports are currently nearly three times higher than they were in 1990.

Exports for the Metro Area continued to increase strongly for the second year in a row following the sharp decline of -14.1% in 2009. The *IEES* historical and projected Los-Angeles- Long Beach Santa Ana MSA merchandise exports are in Figure 5 and Table 5. Merchandise exports from the region regained their pre-recession levels in 2010 and currently stand 41.1% higher than in 2009. In fact, exports

in 2011 are \$12.7 billion higher than the record highs recorded in 2008. This increase in exports can be partially attributed to the strong recovery of the Asian economies in the early phase of the global recovery and the depreciation of the U.S. dollar against key emerging market trading partners. Manufacturing activity, which rose up sharply in 2010 continued to expand in 2011 as firms across the globe increased their demand for domestic manufactured products, especially in high-tech industries, which have a well-established presence in the region.

**Figure 5**  
**LA-LB-SA Total Exports**  
**(Year 2011, millions of dollars)**



Source: IEES, California State University Fullerton and International Trade Administration

Exports from the Los-Angeles- Long Beach Santa Ana MSA are projected to increase over the forecast horizon. We forecast export volumes to increase moderately and reach \$74.3 billion in 2012 -- a 2.2% growth compared to 2011. This increase is well below the pace of the last two years due to the projected global slowdown which is expected to hamper trade in the short term. Export growth is projected to increase at a moderate rate in 2013, rising by 4.7% to \$77.8 billion. Growth momentum is expected to pick up in 2014 with exports from the region estimated to reach \$84.9 billion as the global economy expands at a faster clip.

**Table 5**  
**LA-LB-SA Total Exports**  
**(millions of dollars)**

<b>Year</b>	<b>Total Export Volume</b>	<b>Growth Rate</b>
<b>1990</b>	25,269	
<b>1991</b>	27,801	10.0%
<b>1992</b>	30,184	8.6%
<b>1993</b>	29,205	-3.2%
<b>1994</b>	33,731	15.5%
<b>1995</b>	41,082	21.8%
<b>1996</b>	41,709	1.5%
<b>1997</b>	43,451	4.2%
<b>1998</b>	35,649	-18.0%
<b>1999</b>	37,351	4.8%
<b>2000</b>	42,549	13.9%
<b>2001</b>	36,522	-14.2%
<b>2002</b>	33,312	-8.8%
<b>2003</b>	36,716	10.2%
<b>2004</b>	39,273	7.0%
<b>2005</b>	43,814	11.6%
<b>2006</b>	48,718	11.2%
<b>2007</b>	54,433	11.7%
<b>2008</b>	59,986	10.2%
<b>2009</b>	51,528	-14.1%
<b>2010</b>	62,168	20.6%
<b>2011</b>	72,689	16.9%
<b>Forecast</b>		
<b>2012</b>	74,298	2.2%
<b>2013</b>	77,820	4.7%
<b>2014</b>	84,938	9.1%

*Source: IEES, California State University Fullerton and International Trade Administration*

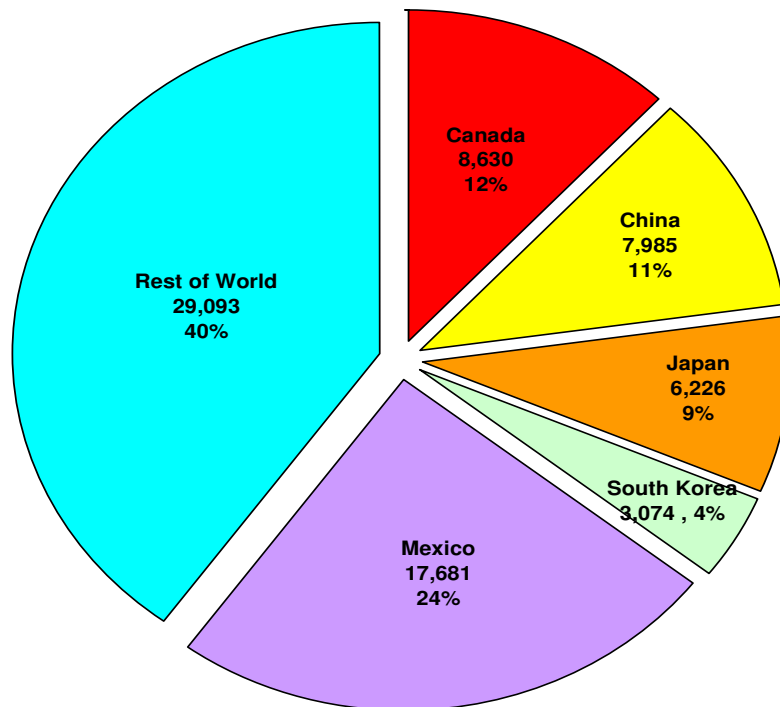
## **6.2 Los-Angeles- Long Beach Santa Ana MSA Exports by Country**

The export profile for the broader Los-Angeles- Long Beach Santa Ana area is similar to Orange County. In 2011, the top five trading partners for the region were: Mexico (\$17.7 billion), Canada (\$8.6 billion), China (\$8.0 billion), Japan (\$6.2 billion), and South Korea (\$3.1 billion) (Figure 6 and Table 6). Since the end of the recession, exports to China have surpassed those to Japan and China now stands as the third largest export destination for the region. Exports to these top five countries make up 60.0% of total exports from the Metro Area in 2011. While exports fell across the board in 2009, with the largest

decline registered for Canada (-22.9%), followed by South Korea (-21.5%), China (-17.1%), and Japan (-16.8%), exports to Mexico rose by 12.5%. The sharp increase in exports to Mexico was due to the depreciation of the U.S. dollar against the Mexican peso immediately after the crisis.

Exports to the top three Asian trading partners (China, Japan and South Korea) account for roughly a quarter of the total exports from the region. In 2011, exports to China accounted for 11% of the total volume, exports to Japan for an additional 9%, and exports to and exports to South Korea made up 4%. The share of the region's exports to Asia has risen steadily over the last decade reflecting high growth rates in emerging Asia and an increased demand from that region for raw materials and advanced technology products. The Los-Angeles- Long Beach Santa Ana area is better positioned to expand exports to Asia than any other MSA in the nation given its geographic location, historic trade ties with Asia and Pacific Rim in particular, and the region's strong manufacturing advantage in high-tech products.

**Figure 6**  
**LA-LB-SA Exports by Country**  
**(Year 2011, millions of dollars)**



Source: International Trade Administration

Exports to all main trading partners have increased significantly during 2011 and are projected to continue to rise further through the forecast horizon. In fact, with the exception of Canada and South Korea, all other major export destinations had reached and exceeded their pre-recession levels by the end of 2011. Our projections indicate that exports to these two countries should also rise above their 2008 levels by the end of 2012. Exports to Canada are projected to grow by 7.4% in 2012 and by 3.0% in 2013, reaching \$10.3 billion by the end of 2014. Exports to Mexico are forecasted to remain relatively flat in 2012, and grow to \$20.5 billion by 2014. By 2014, China is projected to account for over 11.0% of total exports with Japan adding another 8.6%.

**Table 6**  
**LA-LB-SA Exports by Country**  
**(millions of dollars)**

<b>Year</b>	<b>Canada</b>	<b>China</b>	<b>Japan</b>	<b>South Korea</b>	<b>Mexico</b>	<b>Rest of World</b>	<b>Total Exports</b>
<b>1999</b>	5,096	860	4,933	1,568	4,815	20,080	37,351
<b>2000</b>	5,949	1,322	6,700	2,293	6,196	20,089	42,549
<b>2001</b>	5,125	1,816	6,203	1,783	6,003	15,592	36,522
<b>2002</b>	4,323	1,814	4,414	1,586	5,934	15,242	33,312
<b>2003</b>	4,849	2,302	4,599	1,708	5,418	17,840	36,716
<b>2004</b>	5,600	3,041	5,452	2,186	5,970	17,024	39,273
<b>2005</b>	6,397	3,649	5,777	2,412	6,115	19,463	43,814
<b>2006</b>	6,895	5,068	5,791	2,577	7,847	20,539	48,718
<b>2007</b>	8,871	6,005	5,869	3,155	6,559	23,974	54,433
<b>2008</b>	9,246	5,988	6,070	3,436	7,945	27,300	59,986
<b>2009</b>	7,127	4,964	5,049	2,695	8,936	22,757	51,528
<b>2010</b>	8,061	6,506	5,558	3,038	14,205	24,800	62,168
<b>2011</b>	8,630	7,985	6,226	3,074	17,681	29,093	72,689
<b>Forecast</b>							
<b>2012</b>	9,268	8,008	6,567	3,469	17,683	29,303	74,298
<b>2013</b>	9,546	8,555	6,762	3,601	18,681	30,675	77,820
<b>2014</b>	10,301	9,468	7,324	3,912	20,595	33,337	84,938

*Source: IEES, California State University Fullerton and International Trade Administration*

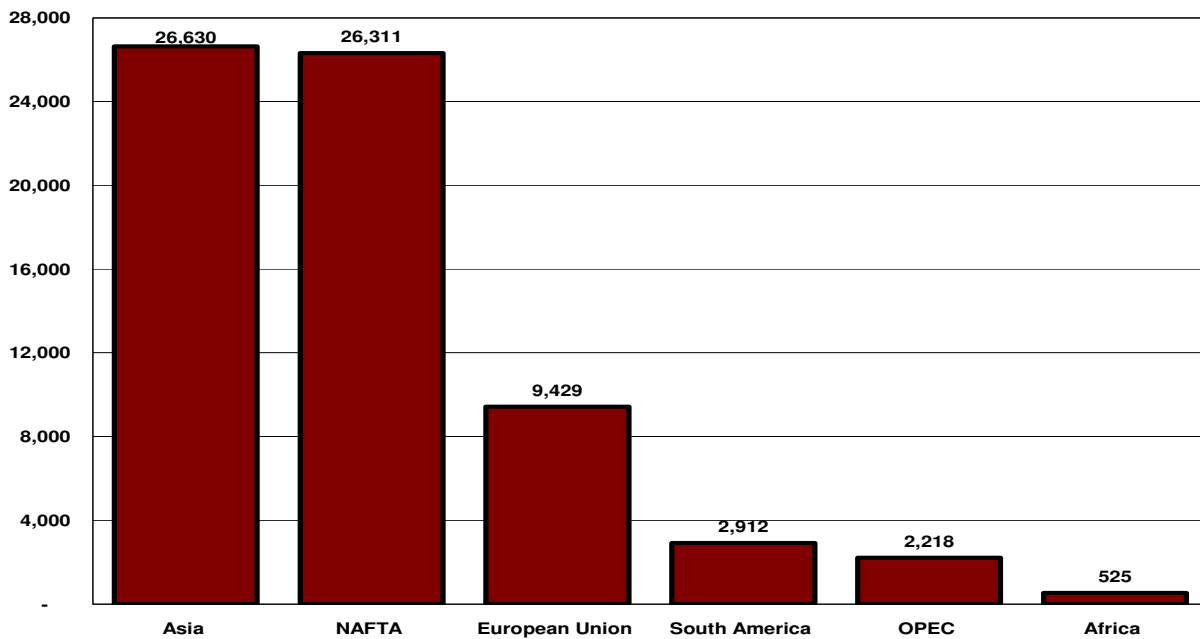
It is important to note that exports to South Korea have the most potential for growth and are poised to increase over the next few years following the U.S.- Korea Free Trade Agreement. The Los Angeles Custom District (LADC) represents nearly 30% of total U.S. trade with South Korea. The elimination of tariffs over the next 3-5 years on 95% of consumer and industrial products negotiated in

the trade accord, is expected to boost U.S. exports to South Korea by an estimated \$11 billion, of which roughly \$4 billion should come from the Los-Angeles-Long Beach-Santa Ana MSA.

### 6.3 Los-Angeles- Long Beach Santa Ana MSA Exports by Region

The three largest trading regions for the Los-Angeles- Long Beach Santa MSA region in 2011 were Asia (\$26.6 billion or 36.6% of total exports), NAFTA (\$26.3 billion or 36.2% of total) and the European Union (\$9.4 billion or 13.0% of total) (see Figure 7 and Table 7). Exports to Asia and NAFTA make up the lion's share of exports from the region combining for 72.8% of exports. Exports to South America, OPEC and Africa combine for a much smaller (7.8%) of total export volumes from the Metro Area.

**Figure 7**  
**LA-LB-SA Exports by Region**  
**(Year 2011 millions of dollars)**



Source: IEES California State University Fullerton and International Trade Administration

Exports in 2011 grew substantially across all regions with South America experiencing the most gains (28%). Exports to OPEC grew by 18.9%, those to NAFTA by 18.2%, to Asia by 16.8% and to the European Union by 14.5%. Exports to NAFTA have grown the most over the two year recovery period of 2010-2011 (by 64%) followed by exports to South America which have risen by a total of 61%. Exports to Europe though up from their recession levels are still below their 2008 pre-crisis peaks as the region's economy continues to struggle under fiscal austerity measures aimed at addressing the debt crisis.

Exports from the Los-Angeles- Long Beach Santa region are projected to increase over the forecast horizon to all regions, rising a bit slower in 2012 and 2013 and at a faster clip in 2014 reflecting the pattern of global economic outlook. Exports to Asia are projected to grow moderately in 2012 and 2013 before showing a much stronger growth of 9.2% in 2014 when they are projected to reach \$31.2

**Table 7**  
**LA-LB-SA Exports by Region**  
**(millions of dollars)**

Year	Africa	Asia	European Union	NAFTA	OPEC	South America
1999	266	11,919	6,736	9,490	729	1,099
2000	233	16,035	8,137	11,886	684	1,054
2001	238	14,496	7,293	10,709	556	1,012
2002	238	12,002	5,900	9,691	523	722
2003	267	12,681	6,107	9,757	557	684
2004	352	16,052	7,351	11,439	773	1,013
2005	406	17,684	7,827	12,512	1,342	1,221
2006	520	19,508	8,049	14,742	1,136	1,477
2007	456	21,982	9,401	15,430	1,598	1,798
2008	617	22,727	10,226	17,191	1,827	2,434
2009	613	19,212	8,188	16,062	1,519	1,806
2010	511	22,803	8,234	22,266	1,866	2,274
2011	525	26,630	9,429	26,311	2,218	2,912
<b>Forecasts</b>						
2012	663	27,374	10,349	25,688	2,233	2,787
2013	639	28,585	10,457	27,574	2,349	2,957
2014	690	31,203	11,420	30,072	2,569	3,268

*Source: IEES, California State University Fullerton and International Trade Administration*

billion. The surge in exports to NAFTA in 2011 and 2012 is unlikely to be matched and exports to these countries are projected to decline by -2.4% in 2012 before rising again to exceed \$30 billion in 2014.

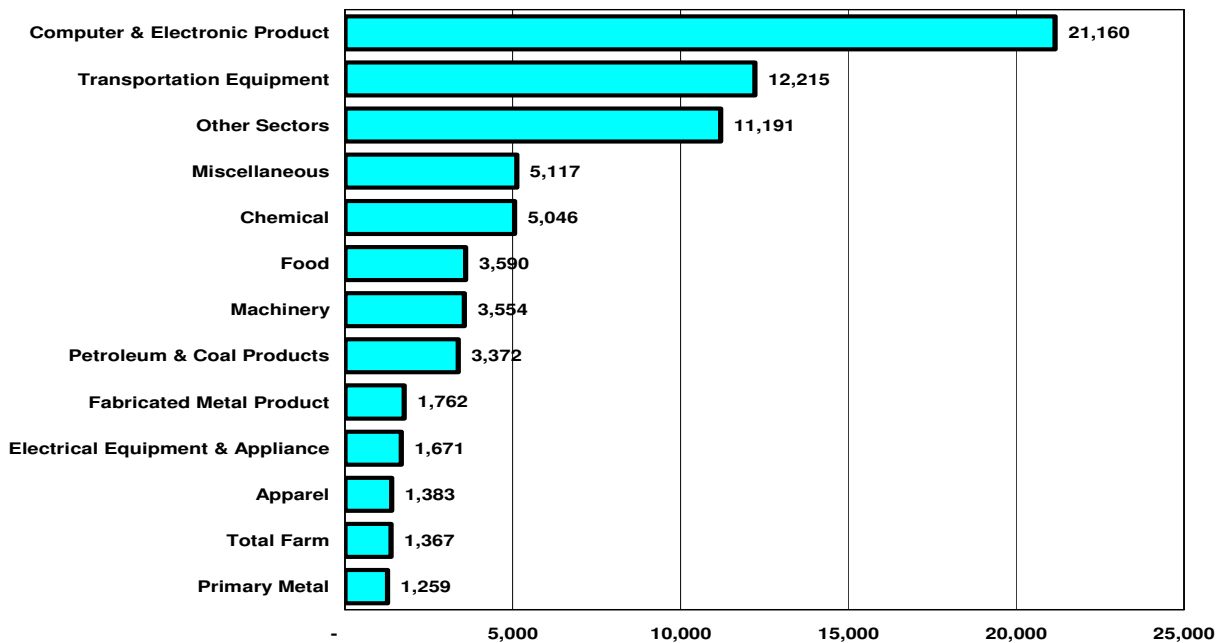


Exports to the European Union are projected to grow at a slightly stronger rate (9.8%) in 2012, with little growth in 2013, reaching \$11.4 in 2014.

**6.4 Los-Angeles- Long Beach Santa Ana MSA Exports by Sector**

Exports from the broader Los-Angeles- Long Beach Santa Ana MSA are highly concentrated on a few industries and products. Computer & Electronic Products (\$21.2 billion) and Transportation Equipment (\$12.2 billion) dominate merchandise exports from the region with a combined total of \$33.4 billion which accounts for 45.9% of total exports, according to the most recent data released by *International Trade Administration* (see Figure 8 and Table 8). Miscellaneous Manufacturing is the third largest exporting sector with \$5.1 billion in exports (7.0% of total MSA exports). Chemical, Machinery, Petroleum & Coal Products, Food, Fabricated Metal Products, and Electrical Equipment & Appliances were other important sectors for Los-Angeles- Long Beach Santa Ana MSA merchandise exports.

**Figure 8  
LA-LB-SA Exports by Sector  
(Year 2011 millions of dollars)**



Exports from the Metro Area are estimated to have risen significantly for all sectors in 2011 as the global recovery expanded, except for Fabricated Metals which declined slightly by -0.3%. Exports from Computer & Electronic Products are projected to decline slightly in 2012 to \$20.7 billion but are expected to grow by 6.9% in 2013 and 9.0% in 2014. Exports in Transportation Equipment are forecasted to increase fairly robustly in 2012 to \$13.3 billion and reach over \$14.8 billion by 2014. The next five largest sectors (Miscellaneous Manufacturing, Chemical, Machinery, Petroleum & Coal Products, and Food) combined for \$20.6 billion in exports in 2011 and are projected to grow to over \$24.7 billion by 2014.

**Table 8**  
**LA-LB-SA Exports by Sector**  
 (millions of dollars)

Year	Transportation Equipment	Computer & Electronic Products	Miscellaneous	Chemical	Machinery	Petroleum & Coal Products	Food
1998	8,366	10,443	1,537	1,634	1,833	462	1,087
1999	7,157	11,219	1,626	1,573	1,929	447	1,097
2000	6,688	13,895	1,822	1,916	3,110	609	1,228
2001	7,110	11,819	1,984	2,134	2,386	686	1,441
2002	5,875	9,708	2,020	2,225	2,177	551	1,308
2003	6,805	8,949	2,084	2,351	2,126	569	1,507
2004	9,212	10,286	2,350	2,514	2,756	585	1,492
2005	10,273	10,233	2,628	2,691	2,800	948	1,649
2006	10,049	11,714	3,119	3,056	2,895	1,044	1,865
2007	11,917	11,761	3,594	3,652	3,141	1,480	2,087
2008	13,465	11,653	4,186	4,068	3,638	3,141	2,552
2009	10,566	11,965	3,910	3,698	2,892	1,953	2,312
2010	11,064	17,946	4,325	4,268	3,208	2,094	2,911
2011	12,215	21,160	5,117	5,046	3,554	3,372	3,590

**Forecast**

2012	13,256	20,699	5,451	5,331	3,728	3,037	3,655
2013	13,635	22,129	5,752	5,648	3,819	3,198	3,911
2014	14,842	24,121	6,393	6,275	4,109	3,575	4,355

Year	Fabricated Metal Product	Electrical Equipment & Appliances	Apparel	Total Farm	Primary Metal	Other Sectors	Total Export Volume
1998	1,092	1,031	836	534	608	6,187	35,649
1999	960	1,050	824	430	439	8,603	37,351
2000	1,062	1,450	948	570	599	8,651	42,549
2001	1,294	1,267	978	699	550	4,175	36,522
2002	1,153	1,154	976	695	498	4,973	33,312
2003	1,190	1,129	893	813	554	7,745	36,716
2004	1,306	1,308	892	858	621	5,094	39,273
2005	1,535	1,395	1,053	987	744	6,878	43,814
2006	1,793	1,707	1,094	1,061	879	8,441	48,718
2007	1,817	1,798	1,073	1,082	921	10,110	54,433
2008	1,764	1,640	1,199	1,159	1,081	10,438	59,986
2009	1,544	1,375	1,208	1,055	829	8,222	51,528
2010	1,768	1,519	1,349	1,031	1,012	9,673	62,168
2011	1,762	1,671	1,383	1,367	1,259	11,191	72,689

**Forecast**

2012	1,980	1,795	1,539	1,494	1,218	11,116	74,298
2013	2,045	1,857	1,588	1,561	1,278	11,398	77,820
2014	2,207	2,020	1,718	1,704	1,397	12,222	84,938

Source: IEES, California State University Fullerton and International Trade Administration

## 7. CONCLUSION

This unique report provides a detailed analysis and forecasts on exports from Orange County (OC) and the broader region of Los Angeles-Long Beach-Santa Ana MSA. With two of the busiest ports in the nation (ports of Los Angeles and Long Beach), trade remains an important source of growth for Southern California, supporting a large number of jobs particularly in manufacturing. Despite the significant impact of exports on the local economy, there are no export data available at the county level for the business community. While the *International Trade Administration* offers some details on merchandise exports for the broader Los Angeles-Long Beach-Santa Ana MSA, no equivalent information is provided for Orange County. This report is important because it is the only available source that fills in this gap by providing detailed historical data and forecasts of total merchandise exports for Orange County and the Los Angeles-Long Beach-Santa Ana region by (A) Country, (B) Region, and (C) Sector.

Merchandise exports are especially important for Orange County after the end of the Great Recession. Exports accounted for roughly 13% of the County's Gross Metropolitan Product (GMP) in 2011-- up from an estimated 9.5% in 2010. The increase in the share of exports in the county's economy is further evidence of the important role of exports in the new post-crisis environment. In fact, the *IEES* estimates that OC exports jumped appreciatively in 2010 (by 22.2%) followed by another strong growth rate of 20.2% in 2011. As a result, OC exports in 2011 totaled \$24.6 billion -- reaching a record-high. Exports from Orange County are projected to increase moderately in 2012 and 2013, and a bit more robustly in 2014 reaching around \$30 billion by the end of the forecast period in 2014.

The county's exports are highly concentrated by country and by products. In 2011, over 57% of Orange County products went to its top five trading partners (Mexico, Canada, Japan, China and South Korea) with more than 64% concentrated in the top three sectors (Computer & Electronic Products, Transportation Equipment, and Miscellaneous Manufacturing). Asia continued to remain Orange County's major trading region in 2011 accounting for 35.3% of total exports, followed closely by NAFTA which received 34.8% of total exports from the county. Exports to Mexico increased

significantly in 2011 to \$5.8 billion, making it the county's main trading partner. Canada is the second largest recipient of the county's exports with \$2.8 billion in 2011. The next three top destination countries for OC exports are in Asia: China (with \$2.6 billion), Japan (with 2.0 billion) and South Korea (with \$1.0 billion). As expected, high-tech clusters dominate OC exports with Computer & Electronic Products totaling \$7.1 billion (28.7% of total OC exports) and Transportation Equipment coming at \$4.2 billion (17.1% of total OC exports). Exports from these industries are expected to continue to grow over the forecast horizon, with Computer & Electronic Products exports forecasted to exceed \$8.3 billion in 2014 and exports in Transportation Equipment reaching \$5.2 billion.

Exports account for 9.2% of the Gross Metropolitan Product (GMP) of the broader Los Angeles-Long Beach-Santa Ana MSA. With the global increase in demand for the region's products, The *IEES* projects that exports from the Metro Area will continue to grow and reach a record high of around \$85 billion by the end of 2014, an increase of 65% compared to the 2009 levels.

The main export destinations for the Metro Area are Asia with \$26.6 billion (36.6% of total exports) and NAFTA with \$26.3 billion (36.2% of total exports). In 2011, exports to Mexico increased significantly to \$17.7 billion (24.3% of total exports). A quarter of the area's exports go to three Asian countries: China (\$8.0 billion, 11%), Japan (\$6.2 billion, 8.6%), and South Korea (\$3.1 billion, 4.6%). Computer & Electronic Products (\$21.2 billion) and Transportation Equipment (\$12.2 billion) dominate merchandise exports from the region. By 2014, exports in these two categories combined are projected to grow to \$39 billion, accounting for roughly 46% of total exports from the region.

Orange County and the broader Los Angeles-Long Beach-Santa Ana MSA should continue to maintain and expand their role as major hubs of international trade and commerce. The region is exceptionally well positioned for export-led growth given its state-of-the-art ports, its extensive infrastructure, creative capital, and strong manufacturing base particularly in high tech products. The U.S.-Korea Free Trade Agreement is expected to have a particularly important role for the region since it has the potential to open up the customer base of the 12th largest world economy to a large number of firms in the region.

<b>8. APPENDIX</b>
A1. Data Sources
A2. Export Data
A3. Methodology
A4. Export Regions
A5. Orange County Exports Detailed Statistics
A6. Los Angeles-Long Beach-Santa Ana Exports Detailed Statistics

**APPENDIX****A1. DATA SOURCES**

- “Annual Survey of Manufactures: Geographic Area Statistics,” *U.S. Census Bureau*, <http://www.census.gov/prod/www/abs/manu-asm-geo>.
- “California International Trade Register,” *Database Publishing Company*, (1992), out-of-print.
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- “U.S. merchandise exports” *International Trade Administration*, <http://tse.export.gov>, 2012.
- “U.S. District and Port Exports,” *WISERtrade*, <http://www.wisertrade.org>, 2012.
- “World Economic Outlook Database,” *International Monetary Fund*, <http://www.imf.org>, 2012.

**APPENDIX****A2. EXPORT DATA**

The following is a summary of the export data sources. Parts of the summary are cited directly from the respective data source.

**National Trade Data**

*TradeStats Express, International Trade Administration, U.S. Department of Commerce*

The *International Trade Administration*, U.S. Department of Commerce, provides trade data for merchandise exports for the nation. This data are currently available annually (total for the year) from 1989 through 2009. Data are available for individual countries, trade/economic groups, and geographic regions by product type and industry. The data are available in the three product classification systems: North American Industry Classification System (NAICS) up to the four-digit level, Harmonized System (HS) at two- and four-digit levels, or Standard International Trade Classification (SITC) up to the three-digit level.

**State Export Data**

*TradeStats Express, International Trade Administration, U.S. Department of Commerce*

State export data are available in annually (total for the year) from 1999 through 2009. Data are available for individual countries, trade/economic groups, and geographic regions by product type and industry. The data are available by NAICS product classification (up to the three-digit level). The data captures origin-of-movement (OM) based on Origin State which differs from an earlier series based on Exporter Location (EL) (1993-2002). The OM series provides export statistics based on the state from which the merchandise starts its journey to the port of export. In contrast, the EL series was based on the zip code of the exporter and unlike the OM series it tended to capture company headquarters, wholesalers, brokers, and freight forwarders. Although OM data are not defined as the state of production origin, it is the closest



approximation to state of production for manufactured goods for which it may also capture the state of consolidation or the state of a broker or wholesaler.

### **U.S. Metropolitan Areas Export Data**

#### *International Trade Administration, U.S. Department of Commerce*

The U.S. Metro Area Export data are available annually (total for the year) from 2006-2009 and are updated semi-annually. The top five export product profiles to a selected market are available for 2008 and 2009 and are limited to only the top 5 countries for the top 50 metropolitan areas. The export series for Metro Areas are computed by matching the five-digit zip codes entered on U.S. export declarations with the five-digit zip codes specified for each metropolitan area using concordance files from the Census Bureau's Geography Division and the U.S. Postal Service. The metropolitan export data series measures only the dollar value of merchandise exports (goods that can physically be transported across the border) and does not include exports of services. The metropolitan export data are only available in nominal U.S. dollars and are not adjusted for inflation or any other factors. Metropolitan areas referenced in the 2005 to 2009 data are based on the 2000 Census.

The export series for Metro Areas is based on the origin of movement by the zip code of the U.S. Principle Party of Interest (USPPI) of record. In 2004 the zip code of the USPPI, the party in the United States that receives the primary benefit (monetary or otherwise) from the shipment, was redefined to indicate the origin of movement of goods. Initially it did not necessarily represent the location of the USPPI. However, due to increased electronic reporting in the Automated Export System (AES), the validity of the reported ZIP Code has improved significantly since 2004. The USPPI of record is not necessarily the entity that produced the merchandise; hence, the series does not furnish complete and reliable data on the production origin of U.S. exports.

The existing Metro Area Export data differs from an earlier series produced by the U.S. International Trade Administration which were available from 1993-2002. The earlier series was based on the Exporter Location (EL) Series collected by the Census Bureau from shipper's export declarations. With the

introduction of the Automated Export System (AES) by the U.S. Customs Bureau and the Census Bureau, the accuracy of the Exporter Location Series became, according to the U.S. Census Bureau, highly suspect, and the series was discontinued. Measurement of exports by metropolitan area was not reported until the introduction of the zip-based Origin of Movement series in 2005. The Census Bureau states that the 2001 and 2005 export series cannot be compared because the 2001 data are based on Exporter Location Series and the 2005 data are based on the Origin of Movement (OM) series.

The OM zip-code series used to measure metropolitan exports differs from the OM data based on origin-state used for state exports. The OM series based on origin of state provides export statistics based on the state from which merchandise began its journey (as listed on the shipper's export declaration). The OM zip-code based series captures the origin of movement by the zip code of the U.S Principle Party of Interest. The collection of this new zip-based series makes it possible to determine exports by metropolitan area. The metropolitan series should only be compared to other sources that also use the Origin of Movement zip code based series and cannot be compared to other data sources that provide state exports (such as TradeStats and USA Trade Online) which publish their export data on an Origin of Movement state-basis.

### **Customs District Data**

#### U.S. Census Bureau

Customs District and port data measure goods that leave out of a particular district or port (regardless of where the good originated in the United States). The metropolitan export data differs from the Custom District or port data. Since the metropolitan export data are based on the Origin of Movement series, this data attempts to track the export back to its origin of export, regardless of where the good actually leaves the country.

**APPENDIX****A3. METHODOLOGY****Estimation of Exports for the Los Angeles - Long Beach - Santa Ana Region**

Total export volume before year 2005 for the Los Angeles–Long Beach–Santa Ana Region (LA-LB-SA) was extrapolated from regional, state, national and international trade trends as well as estimates from an econometric model. To estimate the historical data, regional, state, national and international merchandise exports volumes were used in conjunction with exchange rates, labor productivity in export industries, U.S. and foreign growth measured by real gross domestic product and exports by industry. Forecasts for year 2010 onwards are based on statistical and econometric modeling methodology.

**Estimation of Orange County Exports**

Orange County's total export volume was extrapolated from regional, state, national and international trade trends as well as estimates from an econometric model. An annual survey, the California International Trade Register from Database Publishing Company was also used to estimate historical export volume for Orange County using 401 companies involved in export activities from Orange County. However, this publication is no longer available. The original estimated exports for Orange County have been revised because the newly released 2005-2009 MSA export data has some new important differences concerning the various sectors and export-tracking based on zip-codes. To estimate the historical data, regional, state, national and international merchandise exports volumes were used in conjunction with exchange rates, labor productivity in export industries, and U.S. and foreign growth measured by real gross domestic product. Historical estimates for Orange County exports are also based on exports from the LA-LB-SA region because Orange County is part of the region. Forecasts for year 2010 onwards are based on statistical and econometric modeling methodology.

**APPENDIX****A4. EXPORT REGIONS****Africa**

Algeria, Angola, Benin, Botswana, British Indian Ocean Territories, Burkina, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Brazzaville), Congo (Kinshasa), Cote d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, French Southern and Antarctic Lands, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Morocco, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, St. Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Western Sahara, Zambia, Zimbabwe.

**Asia**

Afghanistan, Bangladesh, Bhutan, Brunei, Burma, Cambodia, China, East Timor, Hong Kong, India, Indonesia, Japan, Laos, Macau, Malaysia, Maldives, Mongolia, Nepal, North Korea, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, Vietnam.

**European Union**

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Federal Republic of Germany, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

**North American Free Trade Agreement (NAFTA)**

Canada, Mexico

**Organization of the Petroleum Exporting Countries (OPEC)**

Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, Venezuela.

**South America**

Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela

*Source: U.S. Census Bureau, Foreign Trade Statistics*

**A5. ORANGE COUNTY EXPORTS**

**Table A1**  
**OC Exports by Country: Growth Rate**

<b>Year</b>	<b>Canada</b>	<b>China</b>	<b>Japan</b>	<b>South Korea</b>	<b>Mexico</b>	<b>Rest of World</b>	<b>Total Exports</b>
<b>2000</b>	24.0%	63.3%	44.3%	55.3%	36.7%	3.9%	18.3%
<b>2001</b>	-15.4%	34.9%	-9.1%	-23.7%	-4.9%	-16.0%	-12.3%
<b>2002</b>	-22.1%	-7.8%	-34.3%	-17.9%	-8.7%	2.0%	-9.4%
<b>2003</b>	10.8%	25.4%	2.9%	6.4%	-9.8%	22.2%	13.6%
<b>2004</b>	17.4%	34.2%	20.5%	30.1%	12.0%	3.3%	10.1%
<b>2005</b>	17.6%	23.5%	9.1%	13.6%	5.4%	13.9%	13.4%
<b>2006</b>	11.5%	43.7%	3.7%	10.6%	32.8%	8.0%	13.2%
<b>2007</b>	36.3%	25.6%	7.4%	29.7%	-11.4%	12.0%	13.2%
<b>2008</b>	9.5%	4.7%	8.6%	14.4%	27.2%	7.4%	9.9%
<b>2009</b>	-22.6%	-16.8%	-16.5%	-21.2%	12.9%	-18.0%	-14.9%
<b>2010</b>	17.0%	35.6%	13.9%	16.6%	64.4%	9.7%	22.2%
<b>2011</b>	14.5%	31.2%	19.8%	8.2%	33.1%	14.6%	20.2%
<b>Forecast</b>							
<b>2012</b>	6.6%	-0.4%	4.7%	12.0%	-0.7%	6.0%	4.0%
<b>2013</b>	4.5%	8.3%	4.4%	5.3%	7.1%	5.1%	5.8%
<b>2014</b>	8.7%	11.5%	9.1%	9.5%	11.1%	8.9%	9.7%

*Source: IEES, California State University Fullerton*

**Table A2**  
**OC Exports by Country: Shares of Total Volumes**

<b>Year</b>	<b>Canada</b>	<b>China</b>	<b>Japan</b>	<b>South Korea</b>	<b>Mexico</b>	<b>Rest of World</b>
<b>1999</b>	12.4%	2.1%	12.0%	3.8%	11.8%	57.8%
<b>2000</b>	13.0%	2.9%	14.7%	5.0%	13.6%	50.8%
<b>2001</b>	12.6%	4.5%	15.2%	4.4%	14.7%	48.7%
<b>2002</b>	10.8%	4.5%	11.0%	4.0%	14.8%	54.8%
<b>2003</b>	10.5%	5.0%	10.0%	3.7%	11.8%	59.0%
<b>2004</b>	11.2%	6.1%	10.9%	4.4%	12.0%	55.3%
<b>2005</b>	11.7%	6.7%	10.5%	4.4%	11.1%	55.6%
<b>2006</b>	11.5%	8.4%	9.7%	4.3%	13.1%	53.0%
<b>2007</b>	13.8%	9.4%	9.2%	4.9%	10.2%	52.5%
<b>2008</b>	13.8%	8.9%	9.0%	5.1%	11.8%	51.3%
<b>2009</b>	12.5%	8.7%	8.9%	4.7%	15.7%	49.4%
<b>2010</b>	12.0%	9.7%	8.3%	4.5%	21.1%	44.4%
<b>2011</b>	11.4%	10.6%	8.2%	4.1%	23.4%	42.3%
<b>Forecast</b>						
<b>2012</b>	11.7%	10.1%	8.3%	4.4%	22.4%	43.1%
<b>2013</b>	11.6%	10.4%	8.2%	4.4%	22.6%	42.9%
<b>2014</b>	11.5%	10.5%	8.2%	4.4%	22.9%	42.5%

*Source: IEES, California State University Fullerton*

**Table A3**  
**OC Exports by Region: Growth Rate**

<b>Year</b>	<b>Africa</b>	<b>Asia</b>	<b>European Union</b>	<b>NAFTA</b>	<b>OPEC</b>	<b>South America</b>
<b>2000</b>	-6.9%	42.9%	28.3%	33.0%	-0.4%	1.9%
<b>2001</b>	0.1%	-11.3%	-12.0%	-11.6%	-20.1%	-5.7%
<b>2002</b>	-7.8%	-23.6%	-25.3%	-16.5%	-13.2%	-34.1%
<b>2003</b>	10.9%	4.4%	2.3%	-0.5%	5.1%	-6.4%
<b>2004</b>	34.2%	28.6%	22.3%	19.1%	41.1%	50.5%
<b>2005</b>	18.6%	13.4%	9.6%	12.6%	78.7%	24.0%
<b>2006</b>	32.6%	14.2%	6.4%	21.9%	-12.4%	25.2%
<b>2007</b>	-7.0%	19.4%	23.8%	10.9%	49.0%	29.0%
<b>2008</b>	42.1%	8.6%	14.2%	17.0%	20.1%	42.2%
<b>2009</b>	-0.3%	-15.1%	-19.6%	-6.2%	-16.5%	-25.5%
<b>2010</b>	-13.7%	22.8%	4.0%	43.4%	27.1%	30.2%
<b>2011</b>	9.8%	24.9%	22.5%	26.4%	27.1%	36.9%
<b>Forecast</b>						
<b>2012</b>	25.4%	2.1%	9.0%	-3.1%	0.0%	-5.0%
<b>2013</b>	-2.4%	5.9%	2.5%	8.8%	6.7%	7.6%
<b>2014</b>	8.9%	10.0%	10.0%	9.9%	10.2%	11.3%

*Source: IEES, California State University Fullerton*

**Table A4**  
**OC Exports by Sector: Growth Rate**

Industry	Transportation Equipment	Computer & Electronic Product	Miscellaneous	Chemical	Machinery	Petroleum & Coal Products	Food
<b>2000</b>	-0.3%	32.9%	17.9%	23.3%	61.8%	37.6%	15.3%
<b>2001</b>	1.3%	-17.3%	11.2%	12.0%	-11.5%	6.9%	16.6%
<b>2002</b>	-15.4%	-19.8%	0.8%	5.9%	-11.5%	-13.4%	-7.0%
<b>2003</b>	19.4%	-3.5%	8.0%	12.4%	4.2%	-3.4%	16.9%
<b>2004</b>	34.6%	19.3%	16.3%	8.9%	29.0%	15.1%	4.3%
<b>2005</b>	12.4%	-0.5%	17.6%	3.5%	9.7%	63.6%	11.2%
<b>2006</b>	0.0%	18.9%	15.9%	18.9%	0.4%	11.2%	17.6%
<b>2007</b>	11.1%	3.9%	14.6%	26.7%	6.3%	30.0%	11.9%
<b>2008</b>	26.0%	-7.9%	20.4%	2.4%	14.1%	116.1%	22.0%
<b>2009</b>	-26.0%	5.9%	-13.7%	-6.5%	-15.9%	-42.1%	-14.7%
<b>2010</b>	7.9%	55.9%	19.4%	14.4%	8.8%	17.7%	33.2%
<b>2011</b>	16.9%	18.4%	30.7%	19.8%	8.1%	70.0%	26.1%
<b>Forecast</b>							
<b>2012</b>	8.3%	0.2%	0.2%	5.5%	12.6%	-10.7%	-0.1%
<b>2013</b>	4.2%	8.1%	6.0%	5.0%	3.9%	7.2%	6.9%
<b>2014</b>	9.6%	9.3%	10.4%	9.7%	8.9%	12.5%	10.0%

Industry	Fabricated Metal Product	Electrical Equipment & Appliance	Apparel	Total Farm	Primary Metal	Other Sectors	Total port Volume
<b>2000</b>	11.3%	41.4%	15.1%	25.4%	36.1%	1.3%	18.3%
<b>2001</b>	32.7%	-18.4%	14.4%	5.9%	-7.5%	-41.6%	-12.3%
<b>2002</b>	-15.8%	-2.1%	-3.9%	31.3%	-7.9%	8.5%	-9.4%
<b>2003</b>	9.2%	1.1%	-9.1%	3.5%	15.2%	55.9%	13.6%
<b>2004</b>	16.2%	20.0%	2.5%	5.4%	13.0%	-30.1%	10.1%
<b>2005</b>	13.1%	12.2%	21.7%	6.3%	28.0%	40.0%	13.4%
<b>2006</b>	19.3%	18.0%	5.4%	17.3%	17.0%	23.5%	13.2%
<b>2007</b>	6.6%	3.5%	0.1%	7.7%	7.9%	29.6%	13.2%
<b>2008</b>	-4.1%	-1.6%	5.9%	13.6%	16.7%	-0.4%	9.9%
<b>2009</b>	-14.1%	-18.7%	5.7%	-16.6%	-19.9%	-18.6%	-14.9%
<b>2010</b>	15.2%	11.0%	4.6%	23.7%	21.3%	6.9%	22.2%
<b>2011</b>	-1.4%	21.5%	9.1%	17.1%	20.7%	20.4%	20.2%
<b>Forecast</b>							
<b>2012</b>	16.9%	5.5%	13.1%	5.1%	3.9%	6.9%	4.0%
<b>2013</b>	4.0%	4.8%	3.5%	5.8%	5.7%	4.3%	5.8%
<b>2014</b>	8.1%	9.9%	9.1%	9.4%	9.7%	9.8%	9.7%

Source: IEES, California State University Fullerton

**Table A5**  
**OC Exports by Sector: Shares of Total Volume**

Industry	Computer & Transportation	Electronic Product	Miscellaneous	Chemical	Machinery	Petroleum & Coal Products	Food
	Equipment						
<b>1998</b>	22.8%	30.8%	4.3%	4.4%	5.3%	1.3%	2.9%
<b>1999</b>	20.0%	30.0%	4.3%	4.2%	4.9%	1.3%	2.9%
<b>2000</b>	16.8%	33.7%	4.2%	4.4%	6.6%	1.5%	2.8%
<b>2001</b>	19.4%	31.8%	5.4%	5.6%	6.7%	1.8%	3.7%
<b>2002</b>	18.1%	28.2%	6.0%	6.6%	6.6%	1.8%	3.8%
<b>2003</b>	19.1%	23.9%	5.7%	6.5%	6.0%	1.5%	3.9%
<b>2004</b>	23.3%	25.9%	6.0%	6.4%	7.1%	1.6%	3.7%
<b>2005</b>	23.1%	22.8%	6.2%	5.9%	6.8%	2.2%	3.7%
<b>2006</b>	20.4%	23.9%	6.4%	6.2%	6.1%	2.2%	3.8%
<b>2007</b>	20.0%	21.9%	6.5%	6.9%	5.7%	2.5%	3.7%
<b>2008</b>	23.0%	18.4%	7.1%	6.4%	5.9%	5.0%	4.2%
<b>2009</b>	20.0%	22.9%	7.2%	7.1%	5.8%	3.4%	4.2%
<b>2010</b>	17.6%	29.2%	7.0%	6.6%	5.2%	3.3%	4.5%
<b>2011</b>	17.1%	28.7%	7.6%	6.6%	4.7%	4.6%	4.8%
<b>Forecasts</b>							
<b>2012</b>	17.8%	27.7%	7.4%	6.7%	5.1%	4.0%	4.6%
<b>2013</b>	17.6%	28.3%	7.4%	6.6%	5.0%	4.0%	4.6%
<b>2014</b>	17.6%	28.2%	7.4%	6.7%	4.9%	4.1%	4.6%

Industry	Fabricated Metal Product	Electrical Equipment & Appliance	Apparel	Total Farm	Primary Metal	Other Sectors
	<b>1998</b>	3.1%	2.9%	2.4%	1.3%	1.7%
<b>1999</b>	2.6%	2.9%	2.3%	1.3%	1.2%	22.4%
<b>2000</b>	2.4%	3.4%	2.2%	1.3%	1.4%	19.2%
<b>2001</b>	3.7%	3.2%	2.9%	1.6%	1.5%	12.7%
<b>2002</b>	3.4%	3.4%	3.1%	2.3%	1.5%	15.3%
<b>2003</b>	3.3%	3.1%	2.5%	2.1%	1.5%	21.0%
<b>2004</b>	3.5%	3.3%	2.3%	2.0%	1.5%	13.3%
<b>2005</b>	3.5%	3.3%	2.5%	1.9%	1.7%	16.4%
<b>2006</b>	3.6%	3.4%	2.3%	2.0%	1.8%	17.9%
<b>2007</b>	3.4%	3.1%	2.0%	1.9%	1.7%	20.5%
<b>2008</b>	3.0%	2.8%	2.0%	1.9%	1.8%	18.6%
<b>2009</b>	3.0%	2.7%	2.4%	1.9%	1.7%	17.8%
<b>2010</b>	2.9%	2.4%	2.1%	1.9%	1.7%	15.6%
<b>2011</b>	2.3%	2.5%	1.9%	1.9%	1.7%	15.6%
<b>Forecasts</b>						
<b>2012</b>	2.6%	2.5%	2.0%	1.9%	1.7%	16.0%
<b>2013</b>	2.6%	2.5%	2.0%	1.9%	1.7%	15.8%
<b>2014</b>	2.6%	2.5%	2.0%	1.9%	1.7%	15.8%

*Source: IEES, California State University Fullerton*



**A6. LOS ANGELES–LONG BEACH -SANTA ANA EXPORTS**

**Table A6**  
**LA-LB-SA Exports by Country: Growth Rate**

<b>Year</b>	<b>Canada</b>	<b>China</b>	<b>Japan</b>	<b>South Korea</b>	<b>Mexico</b>	<b>Rest of World</b>	<b>Total Exports</b>
<b>2000</b>	16.7%	53.7%	35.8%	46.3%	28.7%	0.0%	13.9%
<b>2001</b>	-13.9%	37.4%	-7.4%	-22.2%	-3.1%	-22.4%	-14.2%
<b>2002</b>	-15.7%	-0.1%	-28.8%	-11.0%	-1.1%	-2.2%	-8.8%
<b>2003</b>	12.2%	26.9%	4.2%	7.7%	-8.7%	17.0%	10.2%
<b>2004</b>	15.5%	32.1%	18.6%	28.0%	10.2%	-4.6%	7.0%
<b>2005</b>	14.2%	20.0%	6.0%	10.3%	2.4%	14.3%	11.6%
<b>2006</b>	7.8%	38.9%	0.2%	6.8%	28.3%	5.5%	11.2%
<b>2007</b>	28.7%	18.5%	1.3%	22.4%	-16.4%	16.7%	11.7%
<b>2008</b>	4.2%	-0.3%	3.4%	8.9%	21.1%	13.9%	10.2%
<b>2009</b>	-22.9%	-17.1%	-16.8%	-21.6%	12.5%	-16.6%	-14.1%
<b>2010</b>	13.1%	31.1%	10.1%	12.7%	59.0%	9.0%	20.6%
<b>2011</b>	7.1%	22.7%	12.0%	1.2%	24.5%	17.3%	16.9%
<b>Forecast</b>							
<b>2012</b>	7.4%	0.3%	5.5%	12.8%	0.0%	0.7%	2.2%
<b>2013</b>	3.0%	6.8%	3.0%	3.8%	5.6%	4.7%	4.7%
<b>2014</b>	7.9%	10.7%	8.3%	8.7%	10.2%	8.7%	9.1%

*Source: IEES, California State University Fullerton and International Trade Administration*

**Table A7**  
**LA-LB-SA Exports by Country: Shares of Total Volume**

<b>Year</b>	<b>Canada</b>	<b>China</b>	<b>Japan</b>	<b>South Korea</b>	<b>Mexico</b>	<b>Rest of World</b>
<b>1999</b>	13.6%	2.3%	13.2%	4.2%	12.9%	53.8%
<b>2000</b>	14.0%	3.1%	15.7%	5.4%	14.6%	47.2%
<b>2001</b>	14.0%	5.0%	17.0%	4.9%	16.4%	42.7%
<b>2002</b>	13.0%	5.4%	13.2%	4.8%	17.8%	45.8%
<b>2003</b>	13.2%	6.3%	12.5%	4.7%	14.8%	48.6%
<b>2004</b>	14.3%	7.7%	13.9%	5.6%	15.2%	43.3%
<b>2005</b>	14.6%	8.3%	13.2%	5.5%	14.0%	44.4%
<b>2006</b>	14.2%	10.4%	11.9%	5.3%	16.1%	42.2%
<b>2007</b>	16.3%	11.0%	10.8%	5.8%	12.1%	44.0%
<b>2008</b>	15.4%	10.0%	10.1%	5.7%	13.2%	45.5%
<b>2009</b>	13.8%	9.6%	9.8%	5.2%	17.3%	44.2%
<b>2010</b>	13.0%	10.5%	8.9%	4.9%	22.8%	39.9%
<b>2011</b>	11.9%	11.0%	8.6%	4.2%	24.3%	40.0%
<b>Forecast</b>						
<b>2012</b>	12.5%	10.8%	8.8%	4.7%	23.8%	39.4%
<b>2013</b>	12.3%	11.0%	8.7%	4.6%	24.0%	39.4%
<b>2014</b>	12.1%	11.1%	8.6%	4.6%	24.2%	39.2%

*Source: IEES, California State University Fullerton and International Trade Administration*

**Table A8**  
**LA-LB-SA Exports by Region: Growth Rate**

<b>Year</b>	<b>Africa</b>	<b>Asia</b>	<b>European Union</b>	<b>NAFTA</b>	<b>OPEC</b>	<b>South America</b>
<b>2000</b>	-12.3%	34.5%	20.8%	25.2%	-6.3%	-4.1%
<b>2001</b>	2.0%	-9.6%	-10.4%	-9.9%	-18.7%	-4.0%
<b>2002</b>	-0.1%	-17.2%	-19.1%	-9.5%	-5.9%	-28.6%
<b>2003</b>	12.3%	5.7%	3.5%	0.7%	6.4%	-5.3%
<b>2004</b>	32.0%	26.6%	20.4%	17.2%	38.8%	48.1%
<b>2005</b>	15.2%	10.2%	6.5%	9.4%	73.7%	20.5%
<b>2006</b>	28.1%	10.3%	2.8%	17.8%	-15.3%	21.0%
<b>2007</b>	-12.2%	12.7%	16.8%	4.7%	40.6%	21.7%
<b>2008</b>	35.3%	3.4%	8.8%	11.4%	14.3%	35.4%
<b>2009</b>	-0.7%	-15.5%	-19.9%	-6.6%	-16.8%	-25.8%
<b>2010</b>	-16.6%	18.7%	0.6%	38.6%	22.9%	25.9%
<b>2011</b>	2.7%	16.8%	14.5%	18.2%	18.9%	28.0%
<b>Forecast</b>						
<b>2012</b>	26.3%	2.8%	9.8%	-2.4%	0.7%	-4.3%
<b>2013</b>	-3.7%	4.4%	1.0%	7.3%	5.2%	6.1%
<b>2014</b>	8.1%	9.2%	9.2%	9.1%	9.4%	10.5%

*Source: IEES, California State University Fullerton and International Trade Administration*

**Table A9**  
**LA-LB-SA Exports by Sector: Growth Rates**

Industry	Transportation	Computer & Electronic	Miscellaneous	Chemical	Machinery	Petroleum & Coal	Food
	Equipment	Product				Products	
1999	-14.5%	7.4%	5.8%	-3.8%	5.2%	-3.3%	0.9%
2000	-6.6%	23.9%	12.1%	21.8%	61.2%	36.3%	12.0%
2001	6.3%	-14.9%	8.9%	11.4%	-23.3%	12.6%	17.3%
2002	-17.4%	-17.9%	1.8%	4.3%	-8.7%	-19.6%	-9.2%
2003	15.8%	-7.8%	3.2%	5.7%	-2.4%	3.2%	15.2%
2004	35.4%	14.9%	12.8%	6.9%	29.6%	2.7%	-1.0%
2005	11.5%	-0.5%	11.8%	7.1%	1.6%	62.2%	10.5%
2006	-2.2%	14.5%	18.7%	13.5%	3.4%	10.2%	13.1%
2007	18.6%	0.4%	15.2%	19.5%	8.5%	41.7%	11.9%
2008	13.0%	-0.9%	16.5%	11.4%	15.8%	112.3%	22.3%
2009	-21.5%	2.7%	-6.6%	-9.1%	-20.5%	-37.8%	-9.4%
2010	4.7%	50.0%	10.6%	15.4%	10.9%	7.2%	25.9%
2011	10.4%	17.9%	18.3%	18.2%	10.8%	61.1%	23.3%
<b>Forecast</b>							
2012	8.5%	-2.2%	6.5%	5.6%	4.9%	-9.9%	1.8%
2013	2.9%	6.9%	5.5%	6.0%	2.4%	5.3%	7.0%
2014	8.9%	9.0%	11.1%	11.1%	7.6%	11.8%	11.4%

Industry	Fabricated Metal Product	Electrical Equipment & Appliance	Apparel	Total Farm	Primary Metal	Other Sectors	Total port Volume
1999	-12.1%	1.8%	-1.4%	-19.6%	-27.8%	39.1%	4.8%
2000	10.7%	38.1%	15.1%	32.8%	36.3%	0.6%	13.9%
2001	21.8%	-12.6%	3.1%	22.5%	-8.2%	-51.7%	-14.2%
2002	-10.9%	-8.9%	-0.2%	-0.6%	-9.5%	19.1%	-8.8%
2003	3.3%	-2.2%	-8.5%	17.0%	11.4%	55.7%	10.2%
2004	9.7%	15.9%	-0.1%	5.6%	12.0%	-34.2%	7.0%
2005	17.5%	6.6%	18.0%	15.0%	19.9%	35.0%	11.6%
2006	16.8%	22.4%	3.9%	7.6%	18.1%	22.7%	11.2%
2007	1.4%	5.3%	-1.9%	1.9%	4.8%	19.8%	11.7%
2008	-2.9%	-8.7%	11.7%	7.2%	17.3%	3.2%	10.2%
2009	-12.5%	-16.2%	0.8%	-9.0%	-23.3%	-21.2%	-14.1%
2010	14.5%	10.5%	11.6%	-2.2%	22.1%	17.6%	20.6%
2011	-0.3%	10.0%	2.6%	32.6%	24.4%	15.7%	16.9%
<b>Forecast</b>							
2012	12.3%	7.4%	11.2%	9.3%	-3.3%	-0.7%	2.2%
2013	3.3%	3.5%	3.2%	4.5%	5.0%	2.5%	4.7%
2014	7.9%	8.8%	8.2%	9.2%	9.3%	7.2%	9.1%

Source: IEES, California State University Fullerton and International Trade Administration

**Table A10**  
**LA-LB-SA Exports by Sector: Shares of Total Volume**

Industry	Transportation Equipment	Computer & Electronic Product	Miscellaneous	Chemical	Machinery	Petroleum & Coal Products	Food
1998	23.5%	29.3%	4.3%	4.6%	5.1%	1.3%	3.0%
1999	19.2%	30.0%	4.4%	4.2%	5.2%	1.2%	2.9%
2000	15.7%	32.7%	4.3%	4.5%	7.3%	1.4%	2.9%
2001	19.5%	32.4%	5.4%	5.8%	6.5%	1.9%	3.9%
2002	17.6%	29.1%	6.1%	6.7%	6.5%	1.7%	3.9%
2003	18.5%	24.4%	5.7%	6.4%	5.8%	1.5%	4.1%
2004	23.5%	26.2%	6.0%	6.4%	7.0%	1.5%	3.8%
2005	23.4%	23.4%	6.0%	6.1%	6.4%	2.2%	3.8%
2006	20.6%	24.0%	6.4%	6.3%	5.9%	2.1%	3.8%
2007	21.9%	21.6%	6.6%	6.7%	5.8%	2.7%	3.8%
2008	22.4%	19.4%	7.0%	6.8%	6.1%	5.2%	4.3%
2009	20.5%	23.2%	7.6%	7.2%	5.6%	3.8%	4.5%
2010	17.8%	28.9%	7.0%	6.9%	5.2%	3.4%	4.7%
2011	16.8%	29.1%	7.0%	6.9%	4.9%	4.6%	4.9%
<b>Forecasts</b>							
2012	17.8%	27.9%	7.3%	7.2%	5.0%	4.1%	4.9%
2013	17.5%	28.4%	7.4%	7.3%	4.9%	4.1%	5.0%
2014	17.5%	28.4%	7.5%	7.4%	4.8%	4.2%	5.1%

Industry	Fabricated Metal Product	Electrical Equipment & Appliance	Apparel	Total Farm	Primary Metal	Other Sectors
1998	3.1%	2.9%	2.3%	1.5%	1.7%	17.4%
1999	2.6%	2.8%	2.2%	1.2%	1.2%	23.0%
2000	2.5%	3.4%	2.2%	1.3%	1.4%	20.3%
2001	3.5%	3.5%	2.7%	1.9%	1.5%	11.4%
2002	3.5%	3.5%	2.9%	2.1%	1.5%	14.9%
2003	3.2%	3.1%	2.4%	2.2%	1.5%	21.1%
2004	3.3%	3.3%	2.3%	2.2%	1.6%	13.0%
2005	3.5%	3.2%	2.4%	2.3%	1.7%	15.7%
2006	3.7%	3.5%	2.2%	2.2%	1.8%	17.3%
2007	3.3%	3.3%	2.0%	2.0%	1.7%	18.6%
2008	2.9%	2.7%	2.0%	1.9%	1.8%	17.4%
2009	3.0%	2.7%	2.3%	2.0%	1.6%	16.0%
2010	2.8%	2.4%	2.2%	1.7%	1.6%	15.6%
2011	2.4%	2.3%	1.9%	1.9%	1.7%	15.4%
<b>Forecasts</b>						
2012	2.7%	2.4%	2.1%	2.0%	1.6%	15.0%
2013	2.6%	2.4%	2.0%	2.0%	1.6%	14.6%
2014	2.6%	2.4%	2.0%	2.0%	1.6%	14.4%

Source: IEES, California State University Fullerton and International Trade Administration

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