San Diego County Manufacturing Industry Report
"What's Happening to Manufacturing?"

November 2007

Nationally, economic activity in the manufacturing sector expanded in September for the eighth consecutive month, according to the Manufacturing Institute for Supply Management's Report on Business, and the overall economy grew for the 71st consecutive month. "The trend is toward slower growth in manufacturing as the rate of growth in both the New Orders Index and Production Index slowed, said Norbert J. Ore, C.P.M., chair of the Manufacturing Business Survey Committee. However, new orders for manufactured durable goods decreased in August by $11.3 billion or 4.9%, the U. S. Census Bureau announced September 26th. Cliff Waldman, economist for the Manufacturers Alliance/MAPI said, "… the bulk of the decrease came from a significant drop in the commercial aircraft sector.

The annual growth of total U. S. goods and services exports is forecast to accelerate to 9.1 percent during 2008 as a result of a more competitively priced U.S. dollar overcoming weaker growth in industrialized and developing countries, according to the Manufacturers Alliance/MAPI Quarterly Forecast of U. S. Exports, Global Grown, and the Dollar: Fourth Quarter 2007 Through Fourth Quarter 2008. The dollar is expected to decline by 5 percent against the currencies of industrialized trading partners during the fourth quarter of 2007, followed by 5 percent during the first quarter of 2008 and 3 percent during the second and third quarters of 2008.

The August manufacturing technology consumption was up 26.6 percent from July, and up 9.7 percent from the total of $316.44 million reported for August 2006, according to the U. S. Manufacturing Technology Consumption Report, jointly compiled by the Association for Manufacturing Technology and the American Machine Tool Distributors' Association. "Machine tool orders have outpaced last year's results due in part to the decline in the dollar's strength, which is making manufacturing in the U. S. more competitive," said John Byrd III, AMT president. "Analysis of machine tool consumption provides a reliable leading economic indictor as manufacturing industries invest in capital metalworking equipment to increase capacity and improve productivity." The western region was up 38.2 percent over July but 20.9 percent less than August 2006.

October showed a slower rate of growth than September according to the Institute for Supply Management (ISM). The PMI registered 50.9 percent, a decrease of 1.1 percentage points as compared to September's reading of 52 percent. A reading of 50 percent indicates that the manufacturing economy is generally expanding and below 50 percent indicates that is generally contracting.

San Diego's Manufacturing Industry Slows Down

San Diego County's manufacturing industry continued to slow down during the second and third quarters of 2007 in contrast to the expansion of the industry on a national basis. There was a slight upturn in August, followed by more activity after Labor Day until the week of the fires in October when many manufacturers closed down. The slow down hasn't been across the board for all market segments, but has become more pervasive than it was earlier this year. Biotech and medical device manufacturers seem to be the most insulated from the slow down, while manufacturers producing products for the consumer and housing market have been the most impacted.

Manufacturers in the aerospace and defense industry who produce consumable products for the "war on terrorism" have continued to be very busy. However, other defense and aerospace companies are experiencing an adverse affect from the war because when so much of the Federal defense budget is being spent on supporting the troops and "consumable" supplies, weapons and munitions, other types of defense-related systems and Research & Development, receive fewer funds or no funds at all.

With the "war on terrorism" continuing in Iraq and Afghanistan, San Diego's ship repair industry is now well into its fourth year of recession. Navy ships are out to sea longer, and the Navy is only contracting out the repairs that are absolutely necessary when they come back into port and delaying doing any major overhauls so the ships can go back out to sea as soon as possible. NASSCO's contracts to build new ships are the only bright spot in San Diego's ship building/repair industry. Unfortunately, the small ship repair companies don't seem to benefit from NASSCO's contracts for new ships. Several of these shops have closed down in the last two years, and there will be more closures in the future while the war continues.

It is sometimes hard to understand why some companies are experiencing a slow down until you probe further. One San Diego company makes equipment used in dental labs, and they have been slow since the beginning of the summer, with no upturn since Labor Day. Their best guess as to why business has slowed is that when money gets tight from other sectors of the economy slowing down, people put off getting dental work done, which slows down the work at dental labs, and then dental labs slow down in buying new equipment.

San Diego's off road vehicle industry is also experiencing a slow down that started early this year. The reasons behind this slow down are more complicated. Inquiries to people in this industry revealed that a majority of people who purchase off road vehicles (dune buggies, quad wheelers, and dirt bikes) work in the building industry. With the housing market in a big slump, fewer homes, condos, and apartments are being built so people working in this industry are experiencing a tight money situation and don't have money to purchase off road vehicles or even keep the vehicles they have already purchased. Over the last 15 years, the industry changed from low-cost home "kit" models to expensive "custom-built vehicles made by companies specializing in this field. Today, the price of new custom-built off road vehicles ranges from $50,000 to $70,000.

Many people took advantage of their increased equity as home values doubled or tripled over the past decade by using a portion of their equity from home equity loans to purchase off road vehicles they never dreamed to be able to afford. Some of these loans were sub-prime loans, and now the owners are in financial trouble. Often, the first thing to go is the "toy," so off road vehicles are being sold. This is causing a glut in the market of used off road vehicles, which in turn, hurts the market for new vehicles causing the slow down in the industry.

San Diego has several companies that make equipment for the semiconductor and component handling industry, and they are also experiencing a slow down this year. Intel and AMD are the drivers for this market, and Intel is spending millions to set up a new manufacturing facility in China, scheduled to open next year. While waiting for this new plant to open, Intel isn't ordering new equipment.

Another San Diego company makes specialized equipment to cut metal tubing and metal sheet stock to specific lengths after it has been formed. Their equipment's controllers can be programmed to make up to 100 cuts of different lengths while the tubing or sheet stock is being fed continuously through their machine. In 2006, 30 of their customers went bankrupt from intense offshore competition from China for metal tubing and sheet stock, which in turn, has significantly impacted their sales for equipment. The bulk of their business this year has been selling electronic controllers to upgrade old equipment.

The reality of the intense competition American machine tool companies are facing from China was highlighted recently in an article entitled “That Blur in the Rearview Mirror is China.” Paul der Freedenberg wrote, “The U. S. machine tool industry has lost 38.8 percent of its market share in China over the last decade. “ He went on to add, “The United States currently has 175 manufacturers of metal-cutting machinery. By contrast, China has two and one half times that number, with 415 metal-cutting machine tool builders. “

The air conditioning industry is facing the same challenges from China that the machine tool industry is facing. The September 28th issue of Manufacturing & Technology News reported that “the last U. S. manufacturer of air-conditioning window units is moving its production to Mexico. Frederich Air Conditioning company has announced its intention to close it San Antonio manufacturing plant and move the work to Monterrey, Mexico . . . The company says that low-priced air conditioners from China are forcing it to move out of the United States.”

An earlier issue of Manufacturing & Technology News reported that America’s oldest industrial sector, the glassware industry, is down to one remaining company, Libbey Glass Inc. of Toledo, Ohio. CEO, John Meier, stated, “every major domestic competitor I have faced is either out of business, in Chapter 11 or up for sale.” He blamed unfair foreign competition caused by U. S. trade policies, stating “We need a trading system that respects and rewards hard work, and insures our ability to fight a fair fight. Not one that ties our hands behind our backs while blindly worshiping at the altar of free trade.”

While we haven’t had any air conditioning manufacturers or glassware manufacturers in San Diego County, we do have a power supply and power conditioning industry that is also facing stiff competition from offshore. How long will this local industry be able to survive the offshore competition?

We also haven’t had a glassware industry in San Diego, but we did have one of the major suppliers of paper and plastic cups and plates in El Cajon until a few weeks ago when Solo Cup closed their last U. S. plant. The closure was so sudden and unannounced that some employees came to work on the first Monday of October to find the plant closed and their jobs gone.

Today, American’s manufacturing industry is in a crisis, which some believe is mainly caused by the United States’ massive trade imbalance. Since the United States joined the World Trade Organization, our trade deficit in goods has exploded. The trade deficits have set records for five straight years, and the U. S. Department of Commerce reported in February 2007 that the U. S. merchandise trade deficit, which includes only manufactured goods and commodities, was $836 billion in 2006, an increase of $53 billion, and the U. S. trade deficit with China rose 15% to $233 billion, which offset improvements in the trade deficit with other countries. Of even greater concern is that the U. S. had a $40 billion global trade deficit in advanced technology products (ATP) in 2006, and the increase in the deficit with China over the surplus with other countries accounted for the entire U. S. ATP deficit.

Last year, billionaire investor Warren Buffet warned that the U. S. trade deficit is a bigger threat to the domestic economy than either consumer debt or the federal budget deficit. “In my view it will create political turmoil at some point … Pretty soon, I think there will be a big adjustment,” he said. He also pointed out that

15 years ago, the U.S. had no trade deficit with China, and now it's $200 billion. ("Buffet warns U. S. Trade deficit could cause 'political turmoil'", JournalStar.com Archives, January 19, 2006)

On the positive side, there are companies bringing manufacturing back to the U. S. from China. One local company reported that their Chinese vendors are demanding higher minimum orders by dollar value not just quantity, and their prices have been increasing when each order is placed, as high as a 100 percent increase from one order to the next. Also, their Chinese vendor refuses to give them credit for rejected parts and continues to substitute material that is inferior to that specified on the blueprints. They have recently made a decision to source these parts in the United. States.

Another company reported that their Chinese vendor demands a deposit of 50 percent of the value of the order at the time of placing an order and the balance when they are shipped from China, weeks before the company receives the parts by ship. When CFO's are being pressured to increase their company's cash flow by getting more favorable terms, reducing inventory, and compressing lead times, it becomes less advantageous to source manufacturing offshore in China.

Besides offshore competition, what's causing the downturn in the manufacturing industry?

In my opinion, the root causes are the higher energy and fuel costs, higher interest rates, higher material and processing costs, and the rising cost of employee benefits, especially health care.

Material costs for metal and plastic have risen nearly every month since mid 2006. For example, the price of Stainless Steel has nearly doubled in two years: up from $1.89/lb. in 2005 to $3.53/lb in 2007, and even the less expensive cold rolled steel (CRS) has gone up from $.030/lb to $.55/lb. Plastic materials (petroleum by products) have been impacted by the rising cost of oil over the last three years. Plastic molders and material suppliers are concerned that material prices will go up even faster because of the recent sale of General Electric's Plastic Division to the largest public company in Saudi Arabia, the Saudi Basic Industries Corporation in May 2007 ("General Electric to Sell Plastics Division," New York Times, May 22, 2007). Material suppliers have blamed the higher pricing on the increasing demand for these materials by China and India.

A report released last year by the National Association of Manufacturers stated "the domestic environment for manufacturers is dominated by concerns about rising external costs that make manufacturing from a U. S. base difficult. These costs for corporate taxes, health care and pensions, regulation, natural gas, and tort litigation add more than 30 percent to manufacturers' costs." (www.nam.org/SMMReport)

The report pointed out that the price of natural gas, the primary fuel used in manufacturing in the U. S., rose dramatically after hurricanes Katrina and Rita and hasn't returned to previous price levels. As end users, consumers personally know that gasoline costs went up by 45 percent between early 2005 to mid 2007, with only brief periods of dropping down and stabilizing before rising to the next higher level.

In addition, the report stated that the annual cost of complying with federal regulations is more than $10,000 per employee for manufacturers, while the cost is half that for non-manufacturers. Rising health care costs are one of the most challenging pressures for manufacturers, with some companies spending more than 30 percent of their sales on health care expenses. This is in contrast to the fact that many foreign countries have cut their tax rates significantly more than the United States to keep their industries competitive. France, Italy, Germany, Ireland, Hungary, and the United Kingdom all have lower corporate tax rates than the United States.

When companies are spending more money on these items, they have less money for R & D, new product development, and purchase of capital equipment and systems, which in turn, affects the companies that provide such services and equipment.

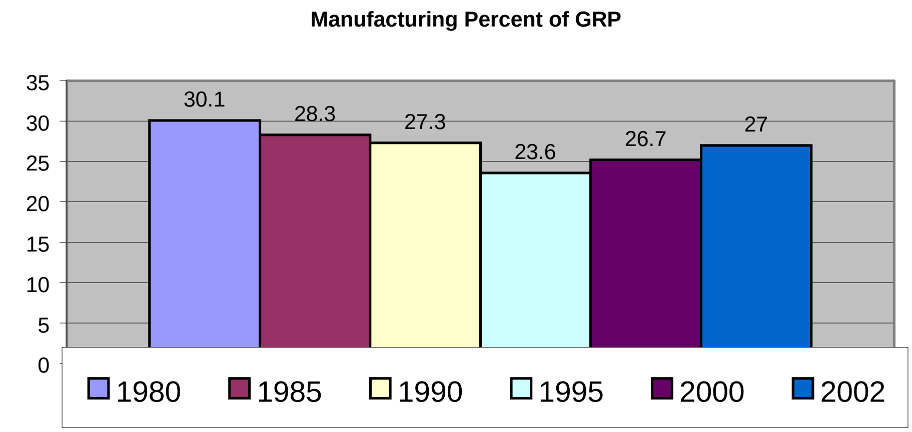
One of the most troubling indicators is the increasingly tougher environmental regulation being imposed on some sectors of the manufacturing industry. In 2005, the Federal Occupational Safety and Health Administration (OSHA) proposed new standards to go in effect January 1st 2006, but Congress didn't approve the new standards as stringently written. The proposed emission standards would have drastically reduced the allowed emissions for hexavalent chromium (a chemical compound intrinsic to the chrome plating process that is a known human carcinogen and a potent toxic air contaminants) from 52 mg. of chromium per meter of air down to 1mg. The emission standard of 52 mg. that went into effect in 1998 in California to comply with the Federal OSHA requirements was already a 97 percent reduction in hexavalent chromium emissions. In May 2006, Congress finally approved slightly less stringent regulations, and they went in effect January 2007. This new standard for hexavalent chromium set the time-weighted average for the amount of chromium that a worker could be exposed to during an 8-hour period at 5 mg. per cubic meter of air.

Metal plating, including chrome plating, provides significant support to the electronics, machine equipment, defense, and automotive after-market sectors of manufacturing. These new standards have undoubtedly required existing chrome plating facilities to purchase new environmental control equipment in order to maintain compliance status. Since the new OSHA standards affect all chrome plating nationwide, this seriously affects all sectors of domestic manufacturing and will accelerate the offshore outsourcing of products requiring chrome plating.

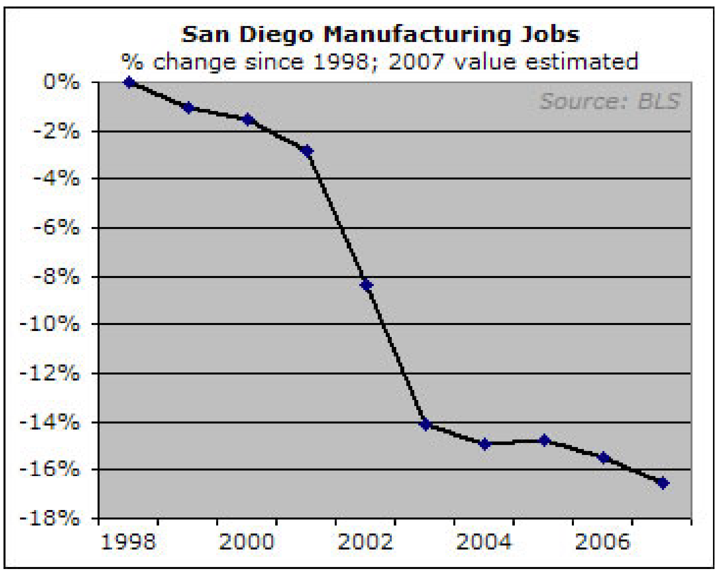
In San Diego county, six metal processors went out of business between 2005-2007, and one other company that is still in business closed down their plating line in anticipation of the stricter regulations going into effect. There are now only four metal processors that do chrome plating in all of San Diego County, and this is stretching out lead times for locally machined and sheet metal fabricated parts that require chrome plating.

Manufacturing is still important to San Diego Economy

Most people don't realize that manufacturing is still the number one generator of the San Diego County Gross Regional Product. The majority of manufacturers in San Diego are technology-based companies because of the use of computers in design and manufacturing, advanced materials, and advanced processes or methods used in manufacturing. In 1980, manufacturing generated 30.1 percent of the Gross Regional Product and provided nearly 100,000 jobs (San Diego Chamber of Commerce Economic Bureau.) Over the last 27 years, manufacturing's share of the Gross Regional Product has slipped downward during periods of economic recession; it still represented 27 percent of the Gross Regional Product as recently as 2002 and provided nearly 160,000 jobs.



During the recession of the early 1990's, we lost about 25,000 jobs in manufacturing between1990 and 1994, but we regained them in the expanding economy of 1995 to 1998. The following graph visually shows the drop in manufacturing jobs since 1998 (used with permission from Rick Toscano of the Voice of San Diego



Manufacturing has been the nearly invisible sector of our local economy. The reason for this is that over 90% of all manufacturing companies in San Diego are under 20 employees. The owner/managers of this size company are too busy running the day-to-date operations of their business to have time to pay attention to what's going on in government until it starts intruding into their affairs and makes it difficult to stay in business. Most small manufacturers don't belong to a trade association or chamber of commerce to represent their needs and views to elected officials who pass laws hurting their business.

It is manufacturing jobs that allow people to afford to live in San Diego, buy homes, cars, etc. and go to tourist attractions such as Sea World and the zoo with their families. Manufacturing jobs provide the basis for the middle class in San Diego that pays the taxes that run the City and County governments. Service sector jobs pay so little these days that they hardly support a single person much less a family.

California's business environment remains unfriendly. In 2005, California dropped to 50th in ranking in the Small Business Survival Index by the Small Business & Entrepreneurship Council, and its rank did not change in the 2006 and 2007 reports. This low overall ranking was based on California's anti-entrepreneur environment in the following areas:

- High cost of worker's compensation premiums
- High electric utility costs
- 2nd highest corporate income tax rates
- Highest personal income tax rate
- Highest Capital Gains tax
- 2nd highest gas tax
- High state and local property tax rates

These problem areas listed above are virtually the same reasons given by the management of companies to whom I have spoken before they moved out of San Diego. We need to make some drastic changes in California's business climate so that we can maintain as much as possible of our manufacturing base for as long as possible in California during this painful transition period for our state and national economy.

San Diego has always been a "start-up business" area where companies grew to a certain size and were acquired by mostly out-of-the area companies. The new owners usually kept the division or subsidiary in San Diego because they were afraid of losing key people if they moved the company out of the area. However, in the last five years, these out-of-state owners took a look at their bottom line for their San Diego-based acquisition and decided they couldn't afford to stay in California. If you will notice from the attached report, San Diego companies have been consolidated to such former business unfriendly states as Ohio, Minnesota, Maryland, and New York.

Governor Schwarzenegger vetoed 10 out of 10 of the California Chamber's identified "job killer" bills in 2004, seven of eight in 2005, and nine of the eleven in 2006. The California Chamber of Commerce just announced that Governor Schwarzenegger had vetoed all 12 "job killer" bills sent to his desk for action by the legislature. (www.calchamber.com) However, the legislature will come up with a plethora of new "job killer" bills next year that he will also need to veto.

The following actions by the State Legislature would help improve the business climate of California and stem the tide of companies leaving California or going out of business:

- Reform of workers' compensation to addresses the issues of fraudulent claims and frivolous lawsuits
- Restructure our unemployment insurance system
- Lower corporate and personal income taxes
- Eliminate burdensome regulations on small businesses
- Restore the capital equipment investment tax credit
- Reduce costs for energy

While the mass exodus of companies moving out of San Diego County slowed down after the Schwarzenegger reforms in early 2004, it began to accelerate last year. The initial list of 40 companies in my first report of March 2003, more than doubled to 85 by the end of 2003. Another 61 companies have either gone out of business or moved out of state since then for a total of 146 companies no longer in business or located in San Diego County.

Based on employment data for companies listed in the 2000 Technology Directory for San Diego County and estimating 20 employees for companies not listed in the directory, the accompanying list of companies represents a loss of nearly 8,000 jobs.

Since each manufacturing job creates three to four other jobs while service jobs only create one to two other job, it is no wonder that we lost nearly 300,000 manufacturing jobs in California since early 2001. Nationwide, a staggering 2.7 million manufacturing jobs have disappeared since 2001 alone. The University of California-Berkely estimates that 14 million jobs are vulnerable to moving overseas in the next few years (www.outsourceoutrage.com/facts). If this trend is not reversed, it is only a matter of time before California's economy and America's economy becomes primarily a service and retail one. It will be difficult for the United States to remain a superpower if this trend becomes a reality. We need to restore California and our country to the "land of opportunity" they once were.

Background: As background for how this series of reports came to pass, ElectroFab Sales is a manufacturers' sales representative agency for "job shop" companies that perform custom fabrication services. Our primary market is OEM's (Original Equipment Manufacturers) in San Diego County that utilize sub-contract manufacturing services.

We began losing customers and prospective customers in early 2001 because of the adverse business climate in Caifornia and the effects of the recession. We started keeping a record of the companies that moved out of state or had gone out of business since January 2001. In the spring of 2003, several legislators asked me to provide them with this list of companies. I turned the list into an analytical report in an effort to make key policy makers aware of the seriousness of situation and have been e publishing reports periodically since then. This13th report provides an update on the state of various industry sectors, along with a focus on what needs to be done to address the issues facing the manufacturing industry in the challenging global economy.

About the Author: Michele Nash-Hoff is President of ElectroFab Sales, an independent manufacturer's representative agency, which she founded in 1985. She is past president of the San Diego Electronics Network, the San Diego Chapter of the Electronics Representative Association, and The High Technology Foundation, as well as several other community and non-profit organizations. She was a candidate for San Diego City Council in 1996 and the California State Assembly in 2000. She has a B.A. from San Diego State University and later earned a certificate in Total Quality Management. Prior reports are accessible at Michele's website of www.electrofab.com