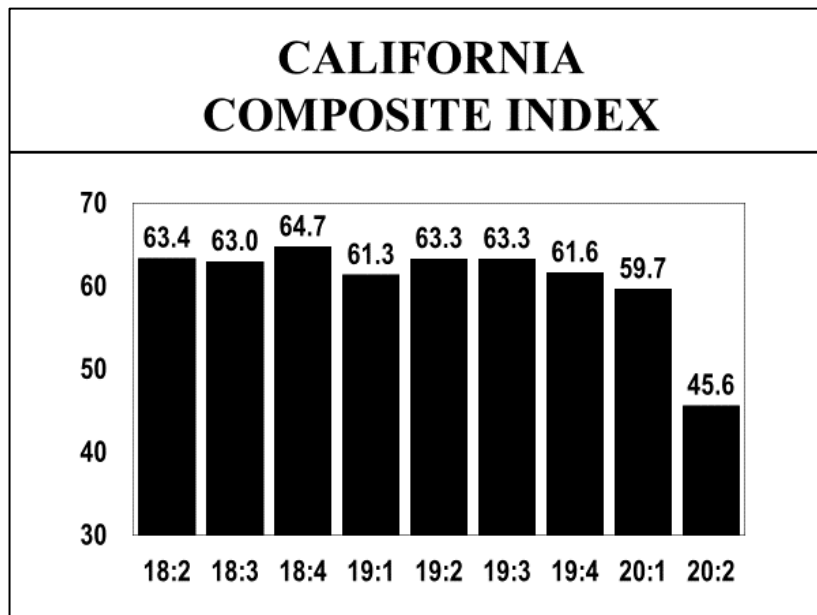


PRESS RELEASE

THE CALIFORNIA MANUFACTURING SECTOR DIVES

ORANGE, CA — Based on a survey of purchasing managers, the California Composite Index, measuring overall manufacturing activity in the state, decreased from 59.7 in the first quarter to 45.6 in the second quarter, indicating a contraction of the manufacturing sector in the second quarter. “The growth of the California manufacturing economy that started in the third quarter of 2009 will come to an abrupt end in the second quarter of this year,” said Dr. Raymond Sfeir, director of the purchasing managers’ survey. The Composite Index would have reached an even lower level were it not for the slow supplier deliveries that resulted from the disruptions in the supply chain rather than the high demand for commodities. The new orders index reached its lowest level since the survey started in 2002, and the employment index is at its lowest level since the third quarter of 2009.



California Manufacturing at a Glance

Composite Index	45.6	Contracting
Production	43.8	Decreasing
Inventories of purchased materials	43.9	Decreasing
Commodity prices	59.0	Rising at a lower rate
Supplier deliveries	68.1	Slowing at a higher rate
New orders	39.2	Decreasing
Employment	40.5	Decreasing

Performance by Industry Group

The index for the **non-durable goods industries** decreased from 55.9 in the first quarter to 46.1 in the second quarter, indicating a contraction in these industries in the second quarter. Production, inventories of purchased materials, new orders and employment are expected to decrease in the second quarter. Commodity prices are expected to rise at a lower rate and supplier deliveries are expected to slow at a higher rate.

The **high-tech industries** include the following: Computer & Electronic Products, and Aerospace Products & Parts. The high-tech industries currently employ about 368,000 employees, amounting to 28% of total manufacturing employment in the state. The index for the high-tech industries decreased from 63.1 in the first quarter to 44.8 in the second quarter indicating a contraction in these industries. Production, inventories of purchased materials, new orders and employment are expected to decrease in the second quarter. Commodity prices are expected to rise at a lower rate and supplier deliveries are expected to slow at a higher rate.

The index for the **durable goods industries other than high-tech** decreased from 60.7 in the first quarter to 45.8 in the second quarter, indicating a contraction in these industries. Similar to the other industries, production, inventories of purchased materials, new orders and employment are expected to decrease in the second quarter. Commodity prices are expected to rise at a lower rate and supplier deliveries are expected to slow at a higher rate.

Comments by the Purchasing Managers

Covid-19 is very disruptive - at risk employees must stay home, lead times increasing and longer transit days. (Food)

As an employee of the beverage industry, we are seeing a high demand due to the corona virus. Both large and small customers have placed larger than normal orders for products. (Beverage & Tobacco)

Delivery of containers from China is back to normal. But the fabric mills in China are not yet at 100% capacity and delivery is taking longer than it should. The only good thing I can offer is we have been able to negotiate some very sharp prices lately on new orders. Orders calling for shipment X-China in May or June (Textile Mill Products)

Prognosis unknown for impact of COVID 19, need more time to see events play out. Looking at people working remotely where possible. (Wood Products)

Due to impact of California minimum wage we've had to restructure from 24-7 to 25-5 operations. That, in turn, is impacting output and employment. Uncertainty due to virus is not expected to impact business, but downturn in the economy could, especially if companies pull back on direct marketing. (Paper)

This next quarter we will need to keep inventory at our same levels even though the expected level of orders will be low. The shutdown of city offices will really impact our digitals services. (Printing & Related Support Activities)

Expected new orders are the most difficult to forecast. We have many customers placing additional orders now and requesting we expedite their orders, but a few have cancelled orders due to people being sheltered at home and unable to buy goods. (Chemicals)

There is an increasing shortage of rail equipment in the upper mid-west due to reduced traffic in the ports from Asia. We have experienced some delays as a result, and it may drive up demand on OTR (over the road). (Plastics & Rubber Products)

All orders stopped last week. We will begin layoffs of non-critical personnel April 1 and will follow with production staff no later than May 1 if things do not change. (Nonmetallic Mineral Products)

We are seeing a slowdown in new orders attributed to the 737MAX production shutdown and uncertainty about the coronavirus. (Primary Metals)

While we are currently receiving more orders, we are skeptical as to whether that trend will continue due to the current pandemic, and receding oil prices. The best we can guess is we will maintain our status quo for the time being. (Fabricated Metal Products)

The only difficulty could be making certain freight is available to ship the materials purchased as well as equipment sold. To date there has been no shortage of freight availability. I have been surveying 100 plus suppliers globally since 02/05/2020 to learn the impact covid-19 has on our company's supply chain. There has been vertically no interruption to our supply chain due to covid-19. (Machinery)

Everything is slowing down after the COVID 19, from 1st impressions there will be a considerable slowdown. (Computer & Electronic Products)

We are affected by COVID-19: slower deliveries and lower output from Asian suppliers for raw materials and finished goods, skeleton crews in our production facilities reducing output for the items we make in-house, and we are paying premiums if we want to maintain original component delivery schedules. Orders were down this quarter and next quarter should be the same (flat vs. current quarter). (Electrical Equipment, Appliance & Components)

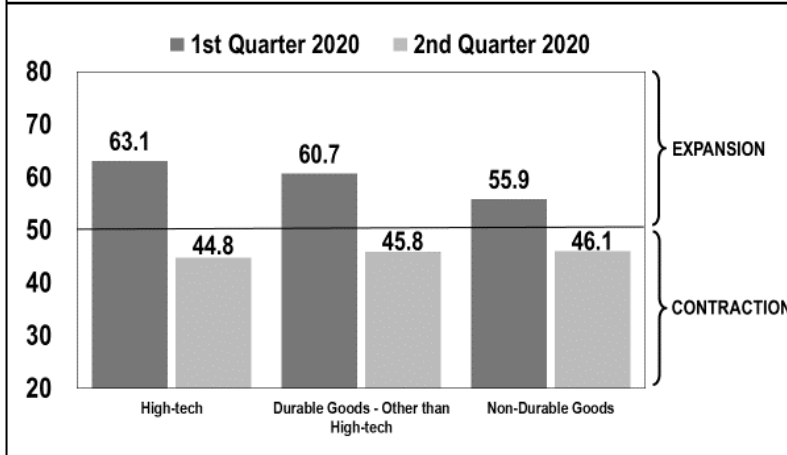
The COVID-19 outbreak has had an impact in slowing down our production in China and is now causing a slowness in interest in our product here in the USA. We are concerned and uncertain about the overall impact this outbreak will have on our business. (Transportation Equipment)

It's really just shooting from the hip at this moment... Who can really be sure about what lies ahead of us in the next quarter? Our factory (furniture manufacturing in Los Angeles County) is shut down for at least 30 days. Good Luck Everyone. (Furniture & Related Products)

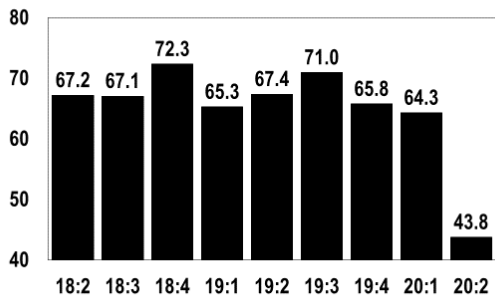
As a supplier to the aerospace industry we are suffering from the double blow of Boeing 737 Max and Coronavirus issues. Our defense aerospace business is holding up well, but commercial aerospace business is not. Coronavirus is not an issue for our supply chain, but it is hitting our customers hard. We have yet to feel the full effect. (Miscellaneous)

Because Boeing is not making 737 Max planes, our sales have been reduced significantly. We stopped all overtime in our manufacturing plant and had a layoff of a total of 14 employees, two in the office, three in shipping and the balance in the machine shop. As soon as Boeing is back on line, things should be restored to normal as long as the virus threat has subsided. (Aerospace Products & Parts)

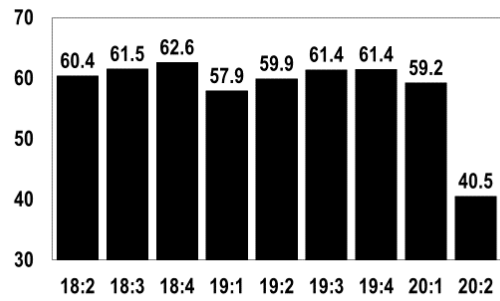
INDICES FOR INDUSTRY GROUPS



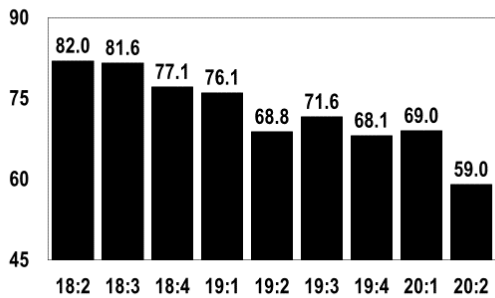
PRODUCTION INDEX



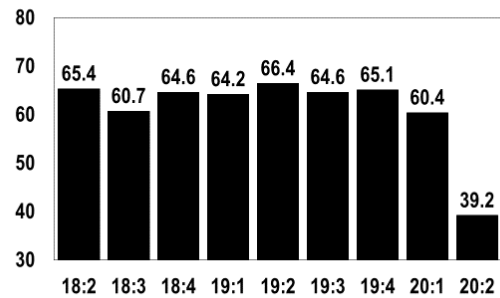
EMPLOYMENT INDEX



COMMODITY PRICE INDEX



NEW ORDERS INDEX



Background and Methodology

The Institute for Supply Management (ISM) conducts a monthly national survey of purchasing managers and publishes the survey results in its *Report on Business*. Such a survey is not available for the state of California. Given the size of our state, and the major role its manufacturing sector plays in the national economy, the A. Gary Anderson Center for Economic Research at Chapman University launched a quarterly survey of California purchasing managers starting in the third quarter of 2002. Similar to the ISM survey, our survey tracks changes in production, employment, new orders, inventories of purchased materials, commodity prices and supplier deliveries. A seasonally adjusted index is computed for each variable except for commodity prices for which no seasonal adjustment is made. Unlike the national survey that tracks the performance of the manufacturing sector in the previous month, the Anderson Center's survey asks the participants to evaluate the expected performance in the coming quarter.

In order to have one single indicator for the performance of the state manufacturing sector, the Anderson Center has developed a Composite Index that is a weighted average of the underlying indices. A value of 50 for the Composite Index shows a general expansion of the manufacturing economy of the state and a value below 50 shows a decline. The industries are classified according to the North American Industry Classification System (NAICS).

**Detailed Results of the Survey of
California Purchasing Managers' Expectations
for the Second Quarter of 2020**

In its attempt to present you with a better delivery of the survey results, the A. Gary Anderson Center for Economic Research has calculated an index for every variable in the survey. The "% Better," is added to half of the "% Same," after which a seasonal factor is used to get a seasonally adjusted index for each variable (except commodity prices). A value over 50 for an index indicates growth and a value below 50 indicates a decline. If for example the index increases from 55 to 59, we say that the growth rate is higher than the previous quarter because 59 is bigger than 55. If the index remains at 55, we say that the growth rate remains the same as the previous quarter. If the index decreases from 55 to 52, we say that we still have growth but that the growth rate is lower than the previous quarter because 52 is smaller than 55. Each industry in the manufacturing sector is represented in the survey based on its employment share of total manufacturing employment in the state.

Production: The seasonally adjusted index for production is expected to decrease from 64.3 in the first quarter to 43.8 in the second quarter, indicating that production is expected to decrease in the second quarter. Production is expected to increase most rapidly in the following industries: Food; Wood Products; and Transportation Equipment. Production is expected to decrease most rapidly in the following industries: Textile Mill Products; Paper; Printing & Related Support Activities; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Aerospace Products & Parts; Furniture & Related Products; and Miscellaneous.

Production	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2020	30.5	32.5	37.0	-6.5	43.8
1 st Quarter of 2020	43.1	40.0	16.9	26.2	64.3
4 th Quarter of 2019	41.2	40.4	18.4	22.8	65.8
3 rd Quarter of 2019	54.7	35.7	9.7	45.0	71.0

Inventories of Purchased Materials: The seasonally adjusted index for inventories of purchased materials is expected to decrease from 57.3 in the first quarter to 43.9 in the second quarter, indicating that inventories are expected to decrease in the second quarter. The Food industry has reported an expected increase in inventories of purchased materials. Inventories of purchased materials are expected to decrease most rapidly in the following industries: Textile Mill Products; Printing & Related Support Activities; Wood Products; Nonmetallic Mineral Products; Machinery; Computer & Electronic Products; Aerospace Products & Parts; Furniture & Related Products; and Miscellaneous.

Inventories of Purchased Materials	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2020	25.9	40.4	33.8	-7.9	43.9
1 st Quarter of 2020	34.5	43.2	22.3	12.2	57.3
4 th Quarter of 2019	29.9	46.9	23.2	6.7	56.7
3 rd Quarter of 2019	38.7	44.7	16.7	22.0	58.9

Commodity Prices: The seasonally unadjusted index for commodity prices is expected to decrease from 69.0 in the first quarter to 59.0 in the second quarter, indicating that commodity prices are expected to rise at a lower rate in the second quarter. Commodity prices are expected to rise most rapidly in the following industries: Food; Beverage & Tobacco; Printing & Related Support Activities; Chemicals; Wood Products; Fabricated Metal Products; Computer & Electronic Products; Aerospace Products & Parts; Furniture & Related Products; and Miscellaneous. The Primary Metals industry reported an expected decrease in commodity prices.

Commodity Prices	% Higher	% Same	% Lower	Net	Index
2 nd Quarter of 2020	30.2	57.7	12.1	18.1	59.0
1 st Quarter of 2020	45.1	47.8	7.1	38.0	69.0
4 th Quarter of 2019	44.3	47.7	8.0	36.2	68.1
3 rd Quarter of 2019	50.1	43.0	6.9	43.2	71.6

Supplier Deliveries: For this variable, an index value over 50 indicates slower deliveries, and an index value under 50 indicates faster deliveries. The seasonally adjusted index for supplier deliveries is expected to increase from 53.3 in the first quarter to 68.1 in the second quarter, indicating that supplier deliveries are expected to be much slower in the second quarter. This slowdown is due mainly to the disruptions in the supply chain that several respondents were concerned about. Supplier deliveries are expected to be slowest in the following industries: Food; Paper; Printing & Related Support Activities; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment (other than Aerospace Products & Parts); Aerospace Products & Parts; Furniture & Related Products; and Miscellaneous. No industry reported an expectation of faster supplier deliveries.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Seasonally Adjusted Index
2 nd Quarter of 2020	44.9	46.1	9.0	36.0	68.1
1 st Quarter of 2020	17.9	70.0	12.1	5.8	53.3
4 th Quarter of 2019	19.8	68.7	11.5	8.3	53.5
3 rd Quarter of 2019	16.0	71.3	12.7	3.2	51.8

New Orders: The seasonally adjusted index for new orders is expected to decrease from 60.4 in the first quarter to 39.2 in the second quarter, indicating that new orders are expected to decrease in the second quarter. This is the lowest value the index has ever reached. New orders are expected to increase most rapidly in the following industries: Food; and Wood Products. New orders are expected to decrease most rapidly in the following industries: Textile Mill Products; Apparel; Printing & Related Support Activities; Plastics & Rubber Products; Primary Metals; Fabricated Metal Products; Computer & Electronic Products; Aerospace Products & Parts; Furniture & Related Products; and Miscellaneous.

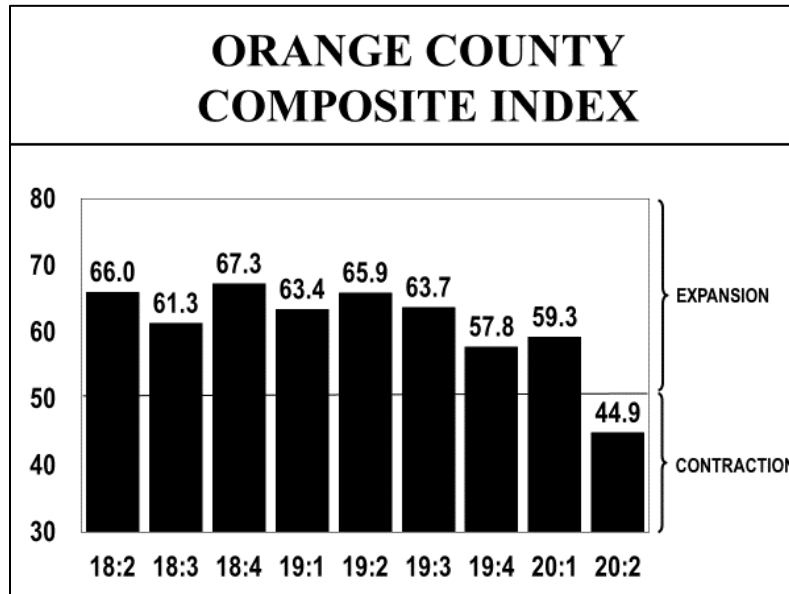
New Orders	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2020	26.9	30.1	42.9	-16.0	39.2
1 st Quarter of 2020	42.1	35.2	22.7	19.4	60.4
4 th Quarter of 2019	40.7	40.3	18.9	21.8	65.1
3 rd Quarter of 2019	46.5	37.7	15.8	30.6	64.6

Employment: The seasonally adjusted index for employment is expected to decrease from 59.2 in the first quarter to 40.5 in the second quarter, indicating that employment in manufacturing is expected to deteriorate substantially in the second quarter. Employment is expected to decrease most rapidly in the following industries: Food; Textile Mill Products; Apparel; Paper; Printing & Related Support Activities; Plastics & Rubber Products; Primary Metals; Fabricated Metal Products; Computer & Electronic Products; Transportation Equipment (other than Aerospace Products & Parts); Furniture & Related Products; and Miscellaneous. No industry reported an expected increase in employment.

Employment	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2020	13.1	57.2	29.7	-16.6	40.5
1 st Quarter of 2020	30.4	56.2	13.4	17.0	59.2
4 th Quarter of 2019	32.3	53.3	14.3	18.0	61.4
3 rd Quarter of 2019	33.9	58.1	8.1	25.8	61.4

Orange County's Manufacturing Survey

The Orange County manufacturing sector's Composite Index decreased from 59.3 in the first quarter to 44.9 in the second quarter, indicating that the county's manufacturing economy is expected to contract in the second quarter. The contraction is similar in magnitude to California's.



The seasonally adjusted index for production decreased from 66.0 in the first quarter to 40.5 in the second quarter, indicating that production is expected to decrease in the second quarter. The seasonally adjusted index for new orders decreased from 60.7 in the first quarter to 38.4 in the second quarter, indicating that new orders are expected to decrease substantially in the second quarter. The employment index will fare even worse as it is expected to decline to 37.4. Similar to California, supplier deliveries are expected to slow considerably in the second quarter.

The index for the **non-durable goods industries** decreased from 57.6 in the first quarter to 45.8 in the second quarter, indicating that these industries are expected to contract in the second quarter. The index for production decreased from 64.1 in the first quarter to 37.5 indicating that production will decrease in the second quarter. The index for the **high-tech industries** decreased from 65.0 in the first quarter to 44.0 in the second quarter, indicating that these industries are expected to contract in the second quarter. Production, inventories of purchased materials, new orders and employment are expected to decrease in the second quarter. The index for the **durable goods industries other than high-tech** decreased from 57.5 in the first quarter to 44.8 in the second quarter, indicating that, like the other industries, the durable goods industries other than high-tech are expected to contract in the second quarter. Production, inventories of purchased materials, new orders, and employment are expected to decrease in the second quarter. Commodity prices for all three industry groups are expected to rise at a lower rate compared to the first quarter. Supplier deliveries for all three industry groups are expected to slow substantially in the second quarter.

ABOUT THE ANDERSON CENTER FOR ECONOMIC RESEARCH

The A. Gary Anderson Center for Economic Research (ACER) was established in 1979 to provide data, facilities and support in order to encourage the faculty and students at Chapman University to engage in economic and business research of high quality, and to disseminate the results of this research to the community.

ANNUAL SCHEDULE OF CONFERENCES AND PRESS RELEASES

JANUARY

- › Economic Forecast Conferences for the Inland Empire
- › California Purchasing Managers Survey
- › Orange County Consumer Sentiment Survey
- › California Consumer Sentiment Survey

APRIL

- › California Purchasing Managers Survey
- › Orange County Consumer Sentiment Survey
- › California Consumer Sentiment Survey

JUNE

- › Economic Forecast Update Conference for the U.S, California and Orange County

JULY

- › California Purchasing Managers Survey
- › Orange County Consumer Sentiment Survey
- › California Consumer Sentiment Survey

OCTOBER

- › California Purchasing Managers Survey
- › Orange County Consumer Sentiment Survey
- › California Consumer Sentiment Survey

DECEMBER

- › Economic Forecast Conference for the U.S., California and Orange County