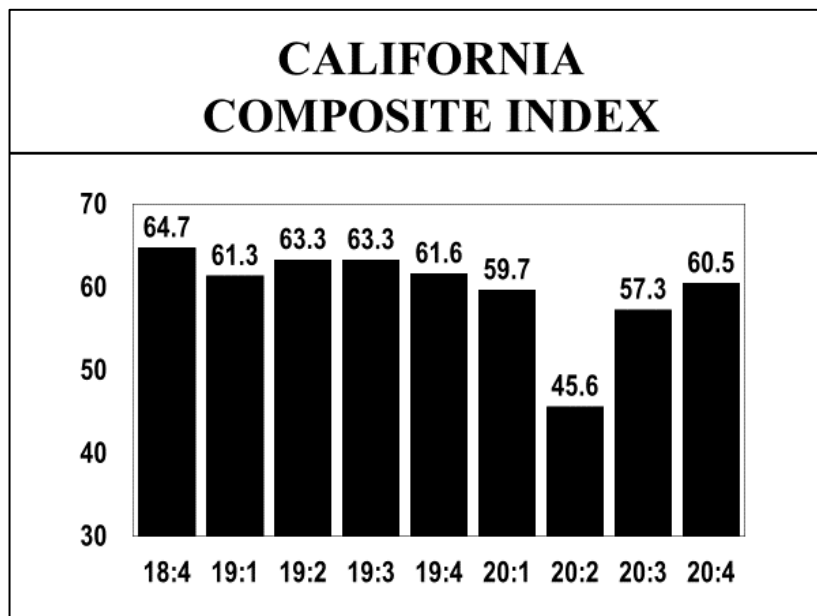


## PRESS RELEASE

# GROWTH IN THE CALIFORNIA MANUFACTURING SECTOR IS ON AN UPWARD TRAJECTORY

ORANGE, CA — Based on a survey of purchasing managers, the California Composite Index, measuring overall manufacturing activity in the state, increased from 57.3 in the third quarter to 60.5 in the fourth quarter. This indicates that the sector is expected to continue its recovery from the devastating effects of COVID-19. “The California manufacturing sector has recuperated 14.9 percentage points since the second quarter of 2020. It is shy 1.1 percentage points from the fourth quarter of 2019. The recovery that was forecast for the third quarter in our last report did take place as evidenced by the increase in employment in the sector,” said Dr. Raymond Sfeir, director of the purchasing managers’ survey. Production, new orders, and employment are expected to increase in the fourth quarter. Additionally, commodity prices are expected to rise, and supplier deliveries are expected to slow at a higher rate.



## California Manufacturing at a Glance

Composite Index	60.5	Increasing at a higher rate
Production	65.6	Increasing at a higher rate
Inventories of purchased materials	54.8	Increasing at a higher rate
Commodity prices	69.0	Rising at a higher rate
Supplier deliveries	63.2	Slowing at a higher rate
New orders	60.8	Increasing at a higher rate
Employment	55.9	Increasing at a higher rate

### Performance by Industry Group

The index for the **non-durable goods industries** increased from 56.9 in the third quarter to 60.1 in the fourth quarter, indicating an expansion in these industries in the fourth quarter. Production, commodity prices, and employment are expected to increase at a higher rate in the fourth quarter. Inventories of purchased materials and new orders are expected to also increase but at roughly the same rate as the third quarter. Supplier deliveries are expected to be slowing 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 357,200 employees, amounting to 29.0% of total manufacturing employment in the state. The index for the high-tech industries increased from 59.4 in the third quarter to 66.0 in the fourth quarter, indicating an expansion in these industries. Production, new orders and employment are expected to increase at a higher rate in the fourth quarter. Commodity prices and inventories of purchased materials are expected to increase at roughly the same rate as in the third quarter.

The index for the **durable goods industries other than high-tech** increased from 56.0 in the third quarter to 56.7 in the fourth quarter, indicating an expansion in these industries. Production and new orders are expected to increase at a lower rate in the fourth quarter. Commodity prices and inventories of purchased materials are expected to increase at a higher rate. Supplier deliveries are expected to be slowing at a higher rate.

### Comments by the Purchasing Managers

Very difficult getting people in California to work. Unemployment easier than working. (Food)

We expect seasonal changes - we sell more of our wine stock in the holiday season. (Beverage & Tobacco Products)

Freight is ridiculously slow and overpriced. We had been increasing orders, but the lack of the \$600 will cause a slowdown. People aren't getting what they need to make purchases. (Textile Mill Products)

Our inventory is way up - we are stuck with everything. We have half the employees we had in March. (Apparel)

Due to a myriad of issues, including the challenges of operating a manufacturing plant in CA, we will be closing our operations during the quarter. Volume has been negatively impacted by the pandemic, compounding the challenges of a fragile business model here. (Paper)

Production will be better because of the election. We are buying more because of the election, but expect to sell it all. We will be hiring more for the election. (Printing & Related Support Activities)

We are seeing a rebound in new orders and new customers. Along with this, longer lead times on raw materials and an increase in costs. Our customers seem nervous and want to book and receive their orders just in case there is a downturn in the supply chain or demand. (Chemicals)

We have seen prices rise due to freight and raw material increases. We have a seen a slow recovery in our markets outside of PPE and barrier work. We don't expect the barrier material to increase until after schools return to in class study. (Plastics & Rubber Products)

Supplying lumber for the building sector is going to be strained in the final quarter. Wildfires and COVID-19 closures are driving the supply side and prices to extreme heights! (Wood Products)

We expect the residential renovation sector to stay strong through the winter as homeowners continue to spend money on their homes rather than on travel. We are adjusting our model to meet this change. (Nonmetallic Mineral Products)

With the impact of Covid-19 we have slowed down. We manufacture for all types of industries but primarily in Aerospace. This has slowed down since planes are not in demand at this time. (Primary Metals)

100% of our customers slow down with new orders. (Fabricated Metal Products)

We are starting to see more of a recovery taking place. The election will likely blip up or down but overall we are doing unexpectedly well. We had a few people leave during the downturn, and we are now working on getting replacements after holding off to see what was going to happen. (Machinery)

Very tumultuous times. Hard to see ahead. Many surprises for all sorts of reasons. On balance, current projects are deteriorating but new opportunities are emerging leaving a revenue gap we need to bridge over the next 6 to 9 months. (Computer & Electronic Products)

We won't hire anyone new now - if we have too much work, we'll go to overtime. (Electrical Equipment, Appliance & Components)

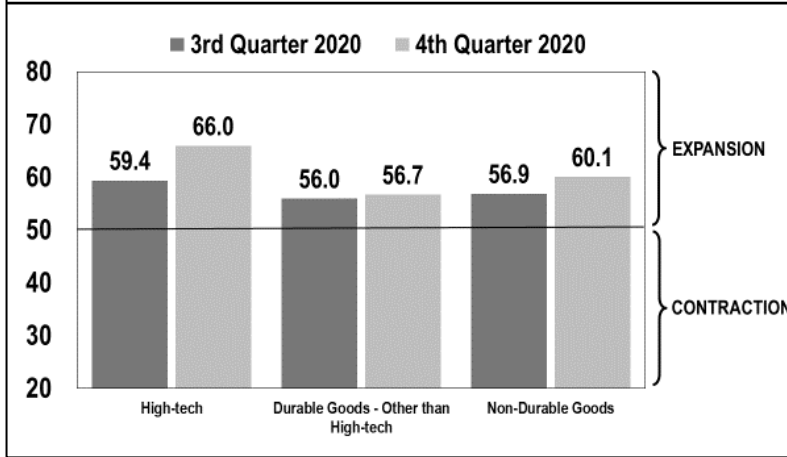
The ports are experiencing HEAVY congestion and not enough employees reporting to work. The cargo volumes have increased drastically due to the lack of passenger belly space in planes. Due to the continued impacts of Covid-19, there is significant equipment and capacity shortages that are contributing to delays nationwide. (Transportation Equipment)

We have seen an uptick in business in the home furnishings industry. Retailers and designers are reporting a good amount of activity following the pandemic related closures. (Furniture & Related Products)

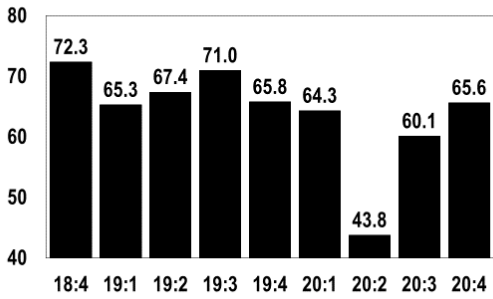
Our industry is very volatile right now due to the government shutting down certain sectors and all of the civil unrest. Our state government continues to make terrible decisions that are really affecting our business and everyone else's business that we've had meetings with. We've never had any thought of leaving the state but we've begun talking about that recently if things don't improve soon. (Miscellaneous)

We've been very fortunate through this Covid-19 situation, it's given us time to catch up on our 2-year backlog. The fact that we do very little business with Boeing is the main reason we haven't closed. (Aerospace Products & Parts)

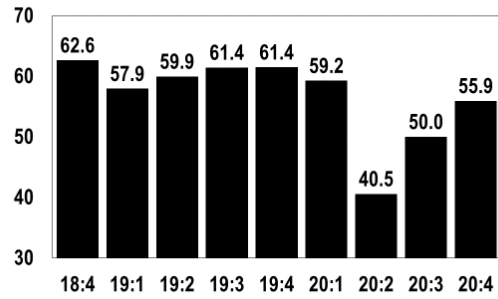
# INDICES FOR INDUSTRY GROUPS



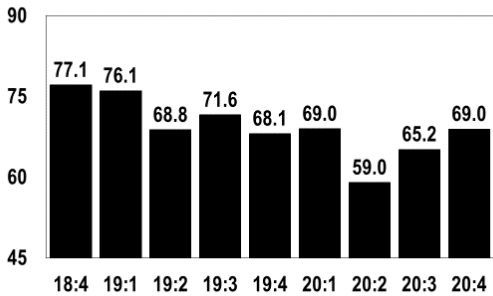
## PRODUCTION INDEX



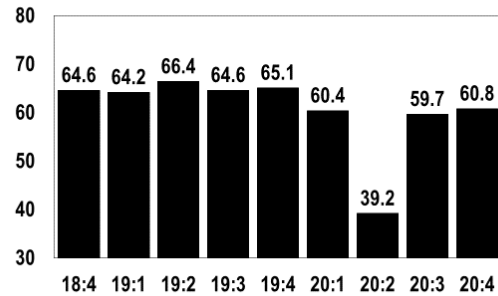
## EMPLOYMENT INDEX



## 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 Fourth 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 increase from 60.1 in the third quarter to 65.6 in the fourth quarter, indicating that production is expected to increase at a higher rate in the fourth quarter. This is the second consecutive quarter that the production index has been above 50. Production is expected to increase most rapidly in the following industries: Food; Textile Mill Products; Apparel; Paper; Printing & Related Support Activities; Chemicals; Wood Products; Nonmetallic Mineral Products; Primary Metals; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Aerospace Products & Parts; and Miscellaneous. Production is expected to decrease most rapidly in the following industries: Plastics & Rubber Products; Fabricated Metal Products; and Furniture & Related Products.

<b>Production</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2020	43.3	36.0	20.7	22.5	65.6
3 <sup>rd</sup> Quarter of 2020	42.7	37.4	19.9	22.9	60.1
2 <sup>nd</sup> Quarter of 2020	30.5	32.5	37.0	-6.5	43.8
1 <sup>st</sup> Quarter of 2020	43.1	40.0	16.9	26.2	64.3

**Inventories of Purchased Materials:** The seasonally adjusted index for inventories of purchased materials is expected to increase from 52.3 in the third quarter to 54.8 in the fourth quarter, indicating that inventories are expected to increase at a higher rate in the fourth quarter. Inventories of purchased materials are expected to increase most rapidly in the following industries: Food; Textile Mill Products; Paper; Nonmetallic Mineral Products; Computer & Electronic Products; and Miscellaneous. Inventories of purchased materials are expected to decrease most rapidly in the following industries: Chemicals; Plastics & Rubber Products; Fabricated Metal Products; Machinery; and Furniture & Related Products.

<b>Inventories of Purchased Materials</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2020	30.4	42.3	27.3	3.1	54.8
3 <sup>rd</sup> Quarter of 2020	34.8	38.7	26.5	8.3	52.3
2 <sup>nd</sup> Quarter of 2020	25.9	40.4	33.8	-7.9	43.9
1 <sup>st</sup> Quarter of 2020	34.5	43.2	22.3	12.2	57.3

**Commodity Prices:** The seasonally unadjusted index for commodity prices is expected to increase from 65.2 in the first quarter to 69.0 in the fourth quarter, indicating that commodity prices are expected to rise at a higher rate in the fourth quarter. Commodity prices are expected to increase most rapidly in the following industries: Food; Apparel; Printing & Related Support Activities; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Aerospace Products & Parts; Furniture & Related Products; and Miscellaneous. No industry reported an expected decrease in commodity prices.

<b>Commodity Prices</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Index</b>
4 <sup>th</sup> Quarter of 2020	43.2	51.5	5.3	37.9	69.0
3 <sup>rd</sup> Quarter of 2020	36.9	56.7	6.5	30.4	65.2
2 <sup>nd</sup> Quarter of 2020	30.2	57.7	12.1	18.1	59.0
1 <sup>st</sup> Quarter of 2020	45.1	47.8	7.1	38.0	69.0

**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 59.6 in the third quarter to 63.2 in the fourth quarter, indicating that supplier deliveries are expected to be slowing at a higher rate in the fourth quarter. Supplier deliveries are expected to be slowest in the following industries: Food; Textile Mill Products; Paper; Printing & Related Support Activities; Chemicals; Plastics & Rubber Products; Wood Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Furniture & Related Products; and Miscellaneous. No industry reported an expectation of faster supplier deliveries.

<b>Supplier Deliveries</b>	<b>% Slower</b>	<b>% Same</b>	<b>% Faster</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2020	37.9	52.0	10.1	27.9	63.2
3 <sup>rd</sup> Quarter of 2020	30.7	57.4	11.9	18.8	59.6
2 <sup>nd</sup> Quarter of 2020	44.9	46.1	9.0	36.0	68.1
1 <sup>st</sup> Quarter of 2020	17.9	70.0	12.1	5.8	53.3



**New Orders:** The seasonally adjusted index for new orders is expected to increase from 59.7 in the third quarter to 60.8 in the fourth quarter, indicating that new orders are expected to increase at a higher rate in the fourth quarter. New orders are expected to increase most rapidly in the following industries: Food; Apparel; Paper; Printing & Related Support Activities; Chemicals; Plastics & Rubber Products; Wood Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Aerospace Products & Parts; and Miscellaneous. New orders are expected to decrease most rapidly in the following industries: Beverage & Tobacco; Plastics & Rubber Products; and Furniture & Related Products.

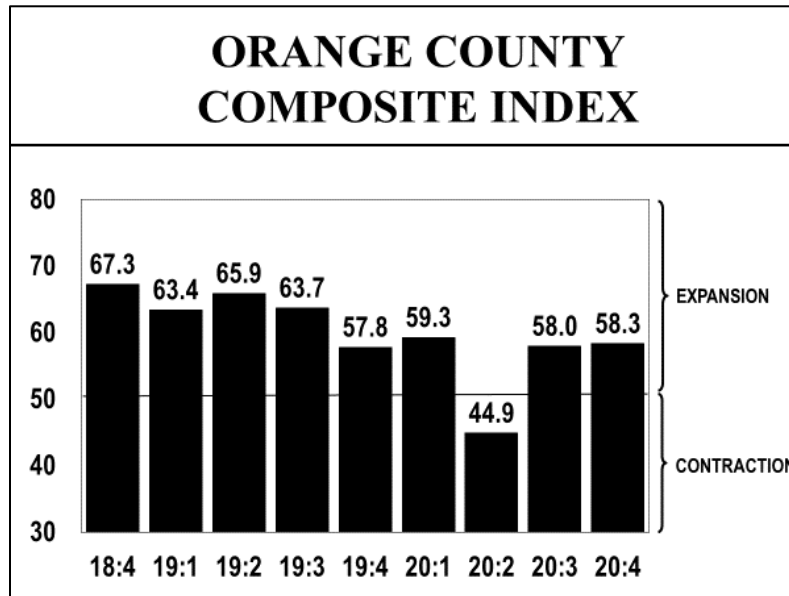
<b>New Orders</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2020	38.1	37.5	24.4	13.8	60.8
3 <sup>rd</sup> Quarter of 2020	44.8	31.0	24.1	20.7	59.7
2 <sup>nd</sup> Quarter of 2020	26.9	30.1	42.9	-16.0	39.2
1 <sup>st</sup> Quarter of 2020	42.1	35.2	22.7	19.4	60.4

**Employment:** The seasonally adjusted index for employment is expected to increase from 50.0 in the third quarter to 55.9 in the fourth quarter, indicating that employment in manufacturing is expected to improve in the fourth quarter. Employment is expected to increase most rapidly in the following industries: Food; Textile Mill Products; Paper; Chemicals; Plastics & Rubber Products; Nonmetallic Mineral Products; Primary Metals; Computer & Electronic Products; Aerospace Products & Parts; and Miscellaneous. Employment is expected to decrease most rapidly in the following industries: Beverage & Tobacco; Plastics & Rubber Products; Fabricated Metal Products; and Furniture & Related Products.

<b>Employment</b>	<b>% Higher</b>	<b>% Same</b>	<b>% Lower</b>	<b>Net</b>	<b>Seasonally Adjusted Index</b>
4 <sup>th</sup> Quarter of 2020	23.4	60.5	16.1	7.3	55.9
3 <sup>rd</sup> Quarter of 2020	20.5	61.5	18.1	2.4	50.0
2 <sup>nd</sup> Quarter of 2020	13.1	57.2	29.7	-16.6	40.5
1 <sup>st</sup> Quarter of 2020	30.4	56.2	13.4	17.0	59.2

## Orange County's Manufacturing Survey

The Orange County manufacturing sector's Composite Index increased marginally from 58.0 in the third quarter to 58.3 in the fourth quarter, indicating that the county's manufacturing economy is expected to expand in the fourth quarter at about the same rate as in the third quarter. The expansion is at a lower rate compared to California's.



The seasonally adjusted index for production increased from 58.5 in the third quarter to 61.9 in the fourth quarter, indicating that production is expected to increase at a higher rate in the fourth quarter compared to the third quarter. The seasonally adjusted index for new orders decreased from 60.0 in the third quarter to 58.7 in the fourth quarter, indicating that new orders are expected to increase at a slower rate in the fourth quarter compared to the third quarter. The employment index increased from 53.1 to 53.4 indicating an increase in employment in the fourth quarter.

The index for the **non-durable goods industries** increased from 56.6 in the third quarter to 57.8 in the fourth quarter, indicating that these industries are expected to expand at a higher rate in the fourth quarter compared to the third quarter. The index for production decreased from 61.1 in the third quarter to 59.4 in the fourth quarter, indicating that production will increase at a lower rate in the fourth quarter. The index for the **high-tech industries** increased from 58.6 in the third quarter to 61.3 in the fourth quarter, indicating that these industries are expected to expand at a higher rate in the fourth quarter. Production, inventories of purchased materials and new orders are expected to increase in the fourth quarter. The index for the **durable goods industries other than high-tech** decreased from 58.1 in the third quarter to 56.8 in the fourth quarter, indicating that the durable goods industries other than high-tech are expected to expand at a lower rate in the fourth quarter. Production, new orders, and employment are expected to increase at a lower rate in the fourth quarter. Commodity prices for all three industry groups are expected to rise at a higher rate compared to the third 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