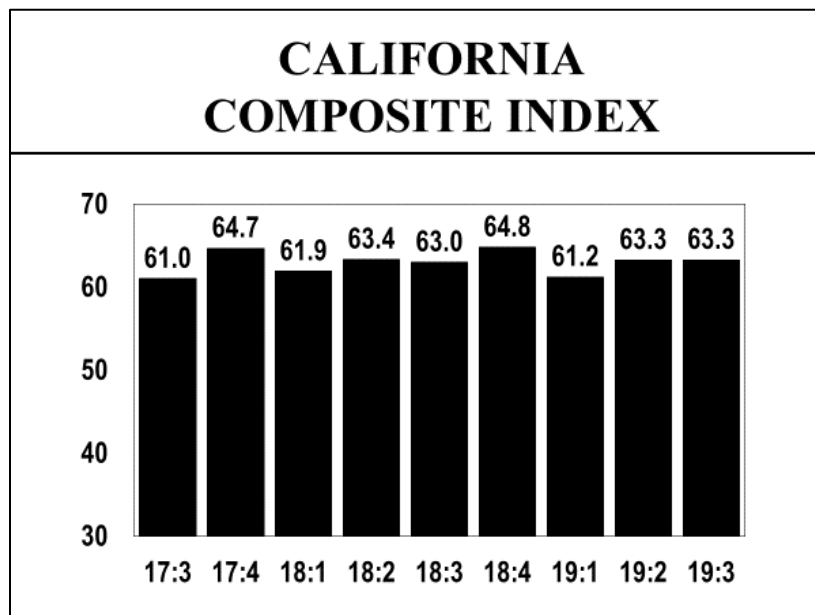


PRESS RELEASE

STEADY GROWTH IN MANUFACTURING

ORANGE, CA — According to a survey of purchasing managers, the California manufacturing economy is expected to expand at the same rate in the third quarter of 2019 as it did in the second quarter. “The California Composite Index, measuring overall manufacturing activity, remained unchanged at 63.3 in the third quarter, indicating a steady growth rate” said Dr. Raymond Sfeir, director of the purchasing managers’ survey. The U.S. labor market has also showed steady growth in employment. The U.S. economy added 512,000 jobs in the second quarter of this year compared to 521,000 jobs in the first quarter. Production is expected to grow at a higher rate compared to the second quarter, and new orders at a lower rate. Commodity prices are expected to reverse course and increase at a higher rate. Trade with China and the potential for higher tariffs continue to be the main concern of purchasing managers. Another concern is the difficulty in getting qualified employees.



California Manufacturing at a Glance

Composite Index	63.3	Growing at the same rate
Production	71.1	Growing at a higher rate
Inventories of purchased materials	58.9	Growing at a lower rate
Commodity prices	71.6	Rising at a higher rate
Supplier deliveries	51.7	Slowing at a slower rate
New orders	64.6	Growing at a lower rate
Employment	61.4	Growing at a higher rate

Performance by Industry Group

The index for the **non-durable goods industries** decreased from 61.3 in the second quarter to 60.8 in the third quarter, indicating a lower rate of growth in the third quarter. Production, commodity prices and employment are expected to grow at a higher rate. Supplier deliveries are expected to be a little faster in the third quarter.

The **high-tech industries** include the following: Computer & Electronic Products, and Aerospace Products & Parts. The high-tech industries currently employ about 364,100 employees, amounting to 27.3% of total manufacturing employment in the state. The index for the high-tech industries increased from 63.5 in the second quarter to 67.5 in the third quarter, indicating a higher rate of growth. Production and commodity prices are expected to grow at a much higher rate.

The index for the **durable goods industries other than high-tech** decreased from 65.5 in the second quarter to 62.4 in the third quarter, indicating a lower rate of growth in the third quarter. Production, inventories of purchased materials, commodity prices and new orders are expected to increase at a lower rate in the third quarter.

Comments by the Purchasing Managers

Agricultural commodity prices are on the rise. Some supplies increasing due to tariffs. (Food)

This is our busy season and we are working on ways of reducing inventory on hand and increasing the frequency of our orders. (Beverage & Tobacco)

Just now becoming effected by the China tariffs, having to raise pricing on clients. (Textile Mill Products)

The labor force or lack thereof is affecting any possible increase in growth. It is increasingly difficult to get a stable work force. (Wood Products)

Seasonal slowdown appears to be coming as expected. Creates opportunities to go after new business, none of which is in the funnel now. (Paper)

Quarters 3 and 4 are our busy season due to healthcare open enrollments. (Printing & Related Support Activities)

Brexit uncertainty having impact on sales within UK. Trade war with China causing China companies to source mainland companies due to increased tariffs. (Chemicals)

Semiconductor is still slow which is reducing demand on some of our raw materials resulting in lower prices. Tariffs are a concern still. (Plastics & Rubber Products)

We have noticed that material pricing is starting to balance itself out with companies manufacturing the materials in the USA instead of overseas due to the tariffs - which is resulting in more jobs in the USA, with higher wages. (Nonmetallic Mineral Products)

Prices are falling in the steel industry, so each buy is cheaper than the last. Inventory is low because of the decline in prices and demand. When demand picks up it should be a rather quick change in pricing as inventories are low. (Primary Metals)

Order bookings are down slightly but we are working on a backlog and have purchased material for part of the next quarter fearing more price raised for aluminum that we got with the China trade escalation. (Fabricated Metal Products)

America and China issues are causing some delays on deliveries and increasing the cost of materials, this leads us to look for new options to buy in different countries and developing local and national vendors to avoid an increase in the costs. (Machinery)

We are having a hard time getting materials from China with the new import tax and maintaining a competitive pricing for our customers. Also having a hard time getting new qualified personnel. (Computer & Electronic Products)

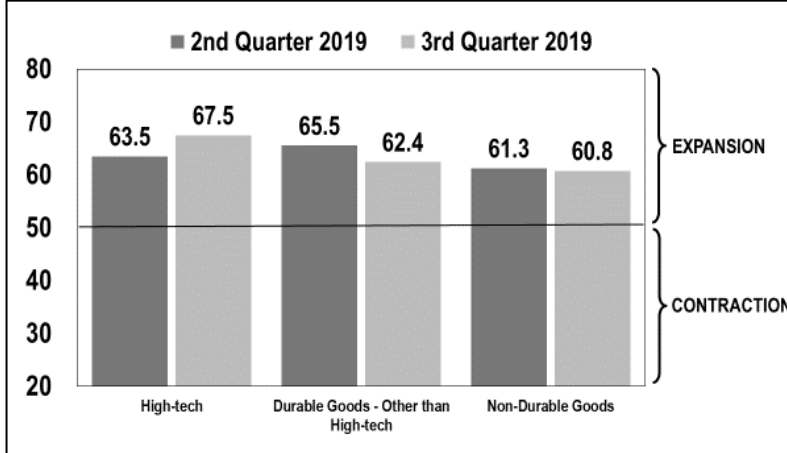
Built up inventory this quarter for an orders bump that did not materialize. Expect that was just a slip up, so we expect to burn through that and keep production flat while orders rise next quarter. Planning for slightly higher pricing and beginning to hire for expected production and order increases in future quarters. (Electrical Equipment, Appliance & Components)

We have concerns that the imposed tariffs on China products are going to continue to have a negative impact on our sales. (Transportation Equipment)

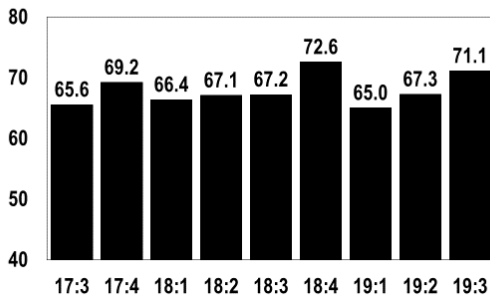
We are in a seasonal business (paint) and bad weather throughout most of the U.S. has negatively impacted our sales so far this year. (Miscellaneous)

Aerospace components have been impacted by the trade war and some manufactures are imposing tariffs on things that they shouldn't have. This would create an economic slowdown in Q3-FY2019. Additionally, PTDE: a component to manufacture wire for aircraft now has 35+ weeks lead-time creating a delay delivering finished products to airlines and aircraft manufacturers. (Aerospace Products & Parts)

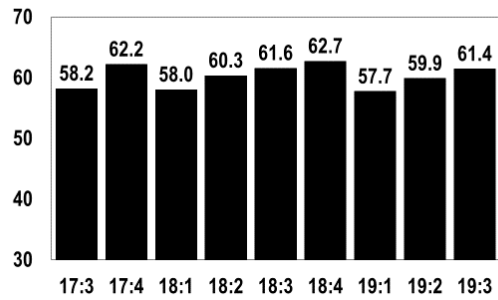
INDICES FOR INDUSTRY GROUPS



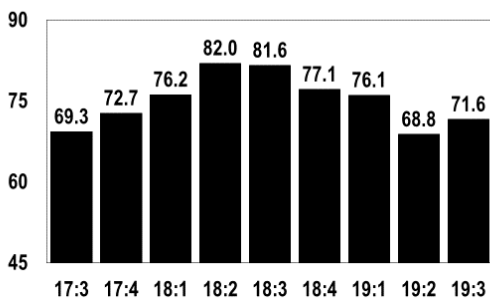
PRODUCTION INDEX



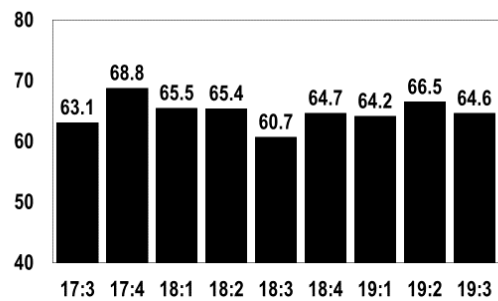
EMPLOYMENT INDEX



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 Third Quarter of 2019**

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 67.3 in the second quarter to 71.1 in the third quarter, indicating that production is expected to increase at a higher rate in the third quarter. This is the forty first consecutive quarter that the production index has been above 50. Production is expected to increase most rapidly in the following industries: Food; Beverage & Tobacco; Paper; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Transportation Equipment; Furniture & Related Products; and Miscellaneous. No industry reported an expected decrease in production.

Production	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3 rd Quarter of 2019	54.7	35.7	9.7	45.0	71.1
2 nd Quarter of 2019	55.3	33.5	11.3	44.0	67.3
1 st Quarter of 2019	42.5	43.0	14.4	28.1	65.0
4 th Quarter of 2018	50.6	33.8	15.5	35.1	72.6

Inventories of Purchased Materials: The seasonally adjusted index for inventories of purchased materials is expected to decrease from 59.7 in the second quarter to 58.9 in the third quarter, indicating that inventories are expected to increase at a lower rate in the third quarter. Inventories of purchased materials are expected to increase most rapidly in the following industries: Food; Apparel; Plastics & Rubber Products; Wood Products; Fabricated Metal Products; Machinery; Computer & Electronic Products; Transportation Equipment; Furniture & Related Products; and Miscellaneous. The Electrical Equipment, Appliance & Components industry reported an expected decrease in inventories of purchased materials.

Inventories of Purchased Materials	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3 rd Quarter of 2019	38.7	44.7	16.7	22.0	58.9
2 nd Quarter of 2019	41.2	42.7	16.1	25.1	59.7
1 st Quarter of 2019	28.1	55.1	16.8	11.2	56.6
4 th Quarter of 2018	38.0	44.0	17.9	20.1	64.1

Commodity Prices: The seasonally unadjusted index for commodity prices is expected to increase from 68.8 in the second quarter to 71.6 in the third quarter, indicating that commodity prices are expected to rise at a higher rate in the third quarter of this year. Commodity prices are expected to increase most rapidly in the following industries: Food; Textile Mill Products; Paper; Printing & Related Support Activities; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment; and Miscellaneous. The Primary Metals industry reported an expected decrease in commodity prices.

Commodity Prices	% Higher	% Same	% Lower	Net	Index
3 rd Quarter of 2019	50.1	43.0	6.9	43.2	71.6
2 nd Quarter of 2019	44.9	47.8	7.3	37.6	68.8
1 st Quarter of 2019	57.9	36.4	5.7	52.2	76.1
4 th Quarter of 2018	62.4	29.5	8.1	54.3	77.1

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 decrease from 55.3 in the second quarter to 51.7 in the third quarter, indicating that supplier deliveries are expected to be barely slower in the third quarter. Supplier deliveries are expected to be slowest in the following industries: Furniture & Related Products; and Miscellaneous. Supplier deliveries are expected to be fastest in the following industries: Food; Chemicals; Primary Metals; Fabricated Metal Products; Machinery; and Computer & Electronic Products.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Seasonally Adjusted Index
3 rd Quarter of 2019	16.0	71.3	12.7	3.2	51.7
2 nd Quarter of 2019	20.8	68.8	10.5	10.3	55.3
1 st Quarter of 2019	21.8	70.5	7.7	14.1	57.6
4 th Quarter of 2018	27.5	62.6	9.8	17.7	58.1

New Orders: The seasonally adjusted index for new orders is expected to decrease from 66.5 in the second quarter to 64.6 in the third quarter, indicating that new orders are expected to increase at a lower rate in the third quarter. New orders are expected to increase most rapidly in the following industries: Food; Beverage & Tobacco; Paper; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment; Furniture & Related Products; and Miscellaneous. No industry reported an expected decrease in new orders.

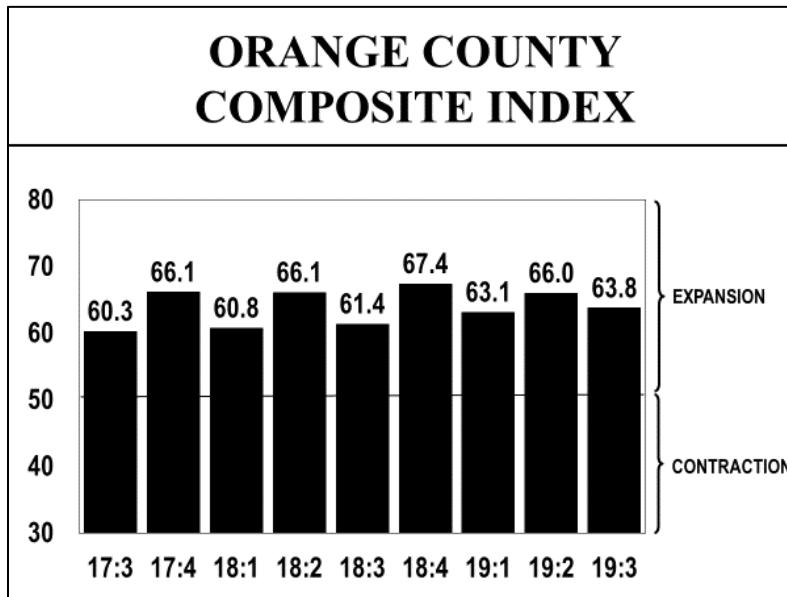
New Orders	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3 rd Quarter of 2019	46.5	37.7	15.8	30.6	64.6
2 nd Quarter of 2019	53.2	36.1	10.8	42.4	66.5
1 st Quarter of 2019	44.0	39.0	17.1	26.9	64.2
4 th Quarter of 2018	42.3	36.3	21.4	20.9	64.7

Employment: The seasonally adjusted index for employment is expected to increase from 59.9 in the second quarter to 61.4 in the third quarter, indicating that employment in manufacturing is expected to improve in the third quarter. Employment is expected to increase most rapidly in the following industries: Food; Paper; Printing & Related Support Activities; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment; Furniture & Related Products; and Miscellaneous. No industry reported an expected decrease in employment.

Employment	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3 rd Quarter of 2019	33.9	58.1	8.1	25.8	61.4
2 nd Quarter of 2019	33.7	55.8	10.4	23.3	59.9
1 st Quarter of 2019	27.0	60.4	12.6	14.4	57.7
4 th Quarter of 2018	31.3	57.7	11.1	20.2	62.7

Orange County's Manufacturing Survey

The Orange County manufacturing sector's Composite Index decreased from 66.0 in the second quarter to 63.8 in the third quarter, indicating that the county's manufacturing economy is expected to grow at a lower rate in the third quarter. This is the fourth consecutive quarter that the Orange County index has been above California's index.



The seasonally adjusted index for production decreased from 69.6 in the second quarter to 67.6 in the third quarter, indicating that production is expected to grow at a lower rate in the third quarter. This is the forty first consecutive quarter that the production index has been above 50. The seasonally adjusted index for new orders decreased from 75.1 in the second quarter to 65.3 in the third quarter, indicating that new orders are expected to grow at a lower rate in the third quarter. Unlike the California case, inventories of purchased materials are expected to increase at a higher rate compared to the second quarter.

The index for the **non-durable goods industries** decreased from 66.3 in the second quarter to 63.7 in the third quarter, indicating that the third quarter growth rate will be lower. The index for production decreased from 70.2 in the second quarter to 67.6 in the third quarter indicating a lower growth rate in the third quarter. The index for the **high-tech industries** decreased from 66.8 in the second quarter to 60.2 in the third quarter, indicating that the third quarter growth rate will be lower. The index for the **durable goods industries other than high-tech** increased from 66.2 in the second quarter to 66.9 in the third quarter, indicating that the durable goods industries other than high-tech are expected to grow at a higher rate in the third quarter. Production, inventories of purchased materials, commodity prices, and employment are expected to grow at a higher rate.

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