CHAPMAN UNIVERSITY | ARGYROS SCHOOL OF BUSINESS AND ECONOMICS

Press Release

A. Gary Anderson Center for Economic Research

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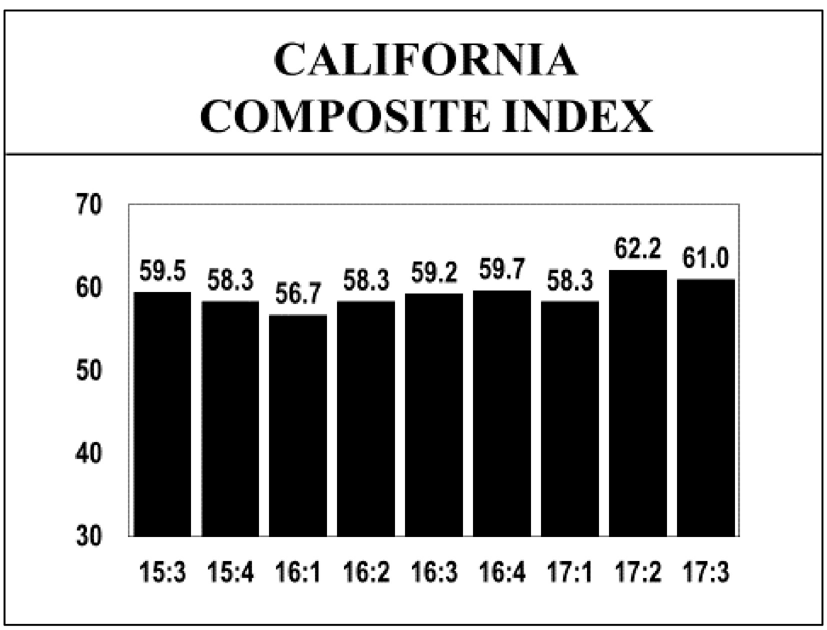
MANUFACTURING SECTOR CHURNS ALONG

ORANGE, CA — According to a survey of purchasing managers, the California manufacturing economy is expected to grow at a slightly lower pace in the third of 2017 compared to the second quarter. The California Composite Index, measuring overall manufacturing activity, decreased from 62.2 in the second quarter to 61.0 in the third quarter, indicating slower expansion. Production, inventories of purchased materials, prices, new orders and employment are expected to grow at a slightly lower growth rate. Supplier deliveries are expected to be slower.



California Manufacturing at a Glance

Composite Index	61.0	Growing at a lower rate
Production	65.5	Growing at a lower rate
Inventories of purchased materials	65.8	Growing at a lower rate
Commodity prices	69.3	Rising at a lower rate
Supplier deliveries	55.3	Slowing at a higher rate
New orders	63.5	Growing at a lower rate
Employment	61.2	Growing at a lower rate

Performance by Industry Group

The index for the **non-durable goods industries** rose from 60.2 in the second quarter to 61.0 in the third quarter, indicating a higher rate of growth in the third quarter of this year. Production, and new orders increased at a higher rate in the third quarter. The employment index was virtually unchanged in the second quarter and commodity prices moderated from 72.3 in the second quarter to 67.3 in the third quarter.

The index for the **durable goods industries** declined from 63.3 in the second quarter to 60.9 in the third quarter, indicating a lower rate of growth in the third quarter. Production, inventories of purchased materials, commodity prices, new orders and employment increased at a lower rate in the third quarter. Supplier deliveries are expected to be slower with an index increasing from 52.1 in the second quarter to 56.7 in the third quarter.

Comments by the Purchasing Managers

Entering into Q3 this will be historically slow time for our industry (poultry), picking up again in Q4, which is historically the busiest. (Food)

Part of our business is seasonal. We make outdoor cushions and pillows. The current season is almost over. We start again with production orders in August. The other part of our business is indoor pillows and cushions which remains strong. The survey reflects the end of the seasonal business. (Textile Mill Products)

Apparel business overall is less active than usual, future orders are less than we expected. (Apparel)

Summer is the slow season for our business. Prices have increased for corrugated and plastic film. Printing paper remains soft, however. (Paper)

Experiencing weak demand coupled with increased prices on raw materials (up to 10% in some cases). Planning for across the board layoffs and increased outsourcing if trend continues through the summer. Suppliers are also continuing to keep inventories low, sometimes making it problematic when those big orders do finally hit. (Printing & Related Support Activities)

Oil prices have remained relatively low; therefore disposable plastic pricing has been stable. Consolidation in biotechnology continues and in turn efficiencies have driven cost savings. (Chemicals)

Customers and prospects are shying away from all those purchases and/or resourcing. (Plastics & Rubber Products)

We have found that our suppliers keep running out of product which is resulting in backorders with delayed deliveries . . . which in turn affects our customers' completion of their order (installations). People are more demanding and want their product now and/or order to be completed yesterday. It is not the same mentality as when you were willing to wait 20 to 25 minutes to get a fresh pizza made with care (not throwing it together). We are unsure if suppliers deliveries are late due to influx of business, or if they are not carrying the inventory they used to . . . we are guessing the first based on some conversations. This is not a good sign for us but it is a good sign for our industry. (Nonmetallic Mineral Products)

Finding it more difficult to find new employees for our operation (metal melting & casting). It appears to be a reflection of lower unemployment rates in our area. At the same time, customer demand for our products (aerospace related) remains very strong. (Primary Metals)

Our back log is dropping. Sales calls (including cold calls) have increased by 20%. Sales people are telling me that business is very slow. (Fabricated Metal Products)

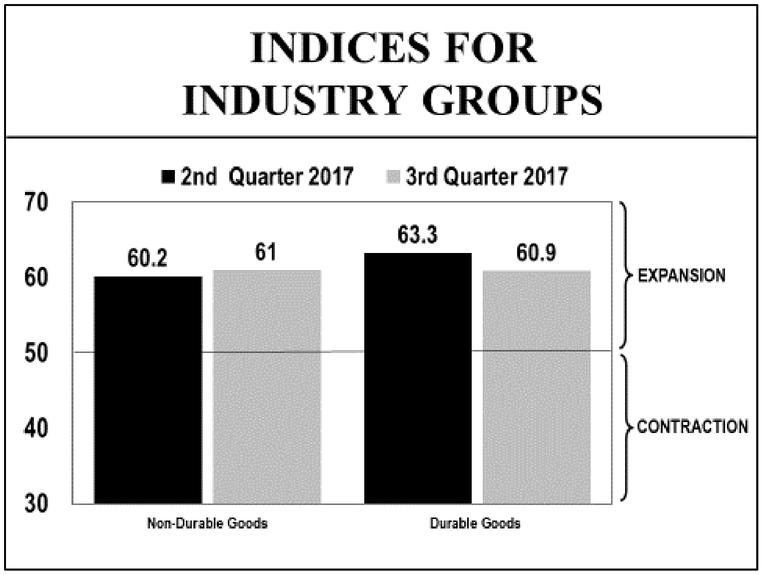
We have just cleaned out low performing staff and at the same time are receiving mid-year price adjustments. We are looking at hiring new staff but are proceeding cautiously as the economic situation has not risen as expected. Department heads are taking good staff from other departments to fill the voids and then those departments are having to go find new staff. Hoping for better results in the second half of the year. (Machinery)

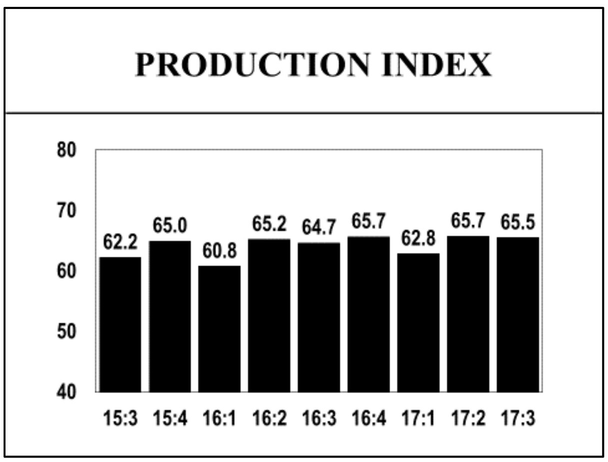
Any action by the US Gov't that curtails trade with Mexico, Canada, and the Asian region will negatively impact our business in the USA, with lower sales, reduced profit, and resulting lower employment locally. Company factories located outside the USA will pick up the demand, maintaining global deliveries. (Computer & Electronic Products)

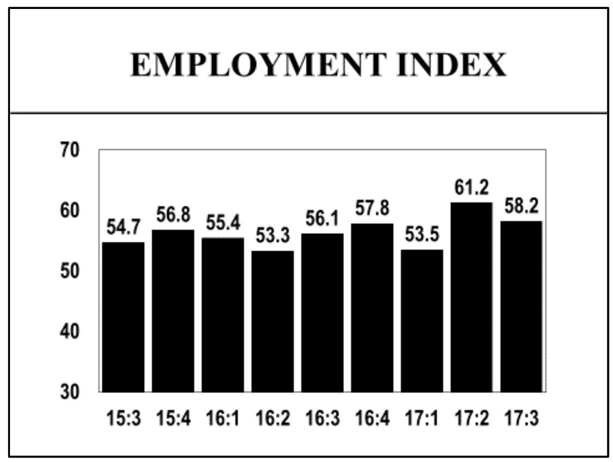
Still riding the wave of prosperity. (Transportation Equipment)

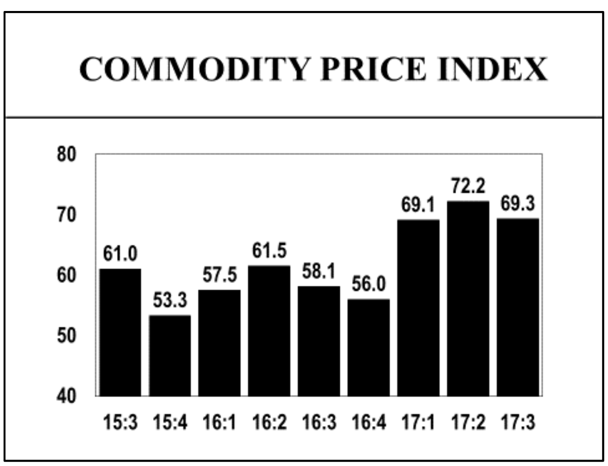
Definitely seeing more price increases on materials & services and have been forced to raise our prices as well. (Furniture & Related Products)

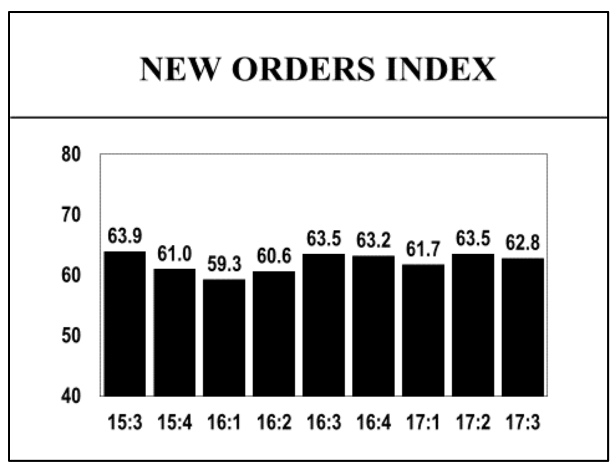
The fourth quarter has been difficult in some aspects of our business. We expect all markets to pick-up next quarter. (Aerospace Products and Parts)


INDICES FOR
INDUSTRY GROUPS
2nd Quarter 2017
3rd Quarter 2017
70
60
50
40
30
60.2
61
63.3
60.9
EXPANSION
CONTRACTION
Non-Durable Goods
Durable Goods


PRODUCTION INDEX
80
70
60
50
40
62.2
65.0
60.8
65.2
64.7
65.7
62.8
65.7
65.5
15:3 15:4 16:1 16:2 16:3 16:4 17:1 17:2 17:3


EMPLOYMENT INDEX
70
60
50
40
30
54.7
56.8
55.4
53.3
56.1
57.8
53.5
61.2
58.2
15:3 15:4 16:1 16:2 16:3 16:4 17:1 17:2 17:3


COMMODITY PRICE INDEX
80
70
60
50
40
61.0
53.3
57.5
61.5
58.1
56.0
69.1
72.2
69.3
15:3 15:4 16:1 16:2 16:3 16:4 17:1 17:2 17:3


NEW ORDERS INDEX
80
70
60
50
40
63.9
61.0
59.3
60.6
63.5
63.2
61.7
63.5
62.8
15:3 15:4 16:1 16:2 16:3 16:4 17:1 17:2 17:3

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. Except for commodity prices and inventories of purchased materials, a seasonally adjusted index is computed for each variable.

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 2017

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 marginally from 65.7 in the second quarter to 65.5 in the third quarter, indicating that production is expected to increase at a marginally lower rate in the third quarter. This is the thirty third consecutive quarter that the production index has been above 50. Production is expected to increase most rapidly in the following industries: Food; Beverage & Tobacco; Apparel; Paper; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Primary Metals; 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 production.

Production	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3rd Quarter of 2017	47.3	39.0	13.7	33.7	65.5
2nd Quarter of 2017	50.6	39.5	9.9	40.7	65.7
1st Quarter of 2017	41.3	41.6	17.1	24.2	62.8
4th Quarter of 2016	39.3	43.2	17.5	21.8	65.7

Inventories of Purchased Materials: The seasonally adjusted index for inventories of purchased materials is expected to decrease from 61.9 in the second quarter to 55.8 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; Chemicals; Plastics & Rubber Products; Wood Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; and Miscellaneous. Inventories of purchased materials are expected to decrease most rapidly in the following industries: Textile Mill Products; Printing & Related Support Activities; and Furniture & Related Products.

Inventories of Purchased Materials	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3rd Quarter of 2017	36.2	43.7	20.1	16.2	55.8
2nd Quarter of 2017	41.2	46.9	11.9	29.3	61.9
1st Quarter of 2017	29.9	46.7	23.4	6.5	54.0
4th Quarter of 2016	27.4	51.7	20.9	6.4	57.1

Commodity Prices: The seasonally unadjusted index for commodity prices is expected to decrease from 72.2 in the second quarter to 69.3 in the third quarter, indicating that commodity prices are expected to rise at a lower rate in the third quarter of this year. Commodity prices are expected to increase most rapidly 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; Furniture & Related Products; and Miscellaneous. No industry reported an expected decrease in commodity prices.

Commodity Prices	% Higher	% Same	% Lower	Net	Index
3rd Quarter of 2017	42.9	52.9	4.2	38.6	69.3
2nd Quarter of 2017	48.4	47.7	3.9	44.5	72.2
1st Quarter of 2017	43.9	50.5	5.7	38.2	69.1
4th Quarter of 2016	21.0	69.9	9.0	12.0	56.0

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 53.0 in the second quarter to 55.3 in the third quarter, indicating that supplier deliveries are expected to be slower at a higher rate in the third quarter. Supplier deliveries are expected to be slowest in the following industries: Food; Chemicals; Wood Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Furniture & Related Products; and Miscellaneous. The Apparel industry reported an expectation of faster supplier deliveries.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Seasonally Adjusted Index
3rd Quarter of 2017	19.6	70.8	9.6	9.9	55.3
2nd Quarter of 2017	15.3	75.4	9.3	5.9	53.0
1st Quarter of 2017	16.6	73.0	10.4	6.2	53.5
4th Quarter of 2016	15.2	69.6	15.1	0.1	49.3

New Orders: The seasonally adjusted index for new orders is expected to decrease from 63.5 in the second quarter to 62.8 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; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment; and Miscellaneous. New orders are expected to decrease most rapidly in the following industries: Printing & Related Support Activities; and Furniture & Related Products.

New Orders	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3rd Quarter of 2017	45.2	37.1	17.6	27.6	62.8
2nd Quarter of 2017	49.4	37.0	13.6	35.8	63.5
1st Quarter of 2017	43.7	34.9	21.5	22.2	61.7
4th Quarter of 2016	40.9	35.7	23.3	17.6	63.2

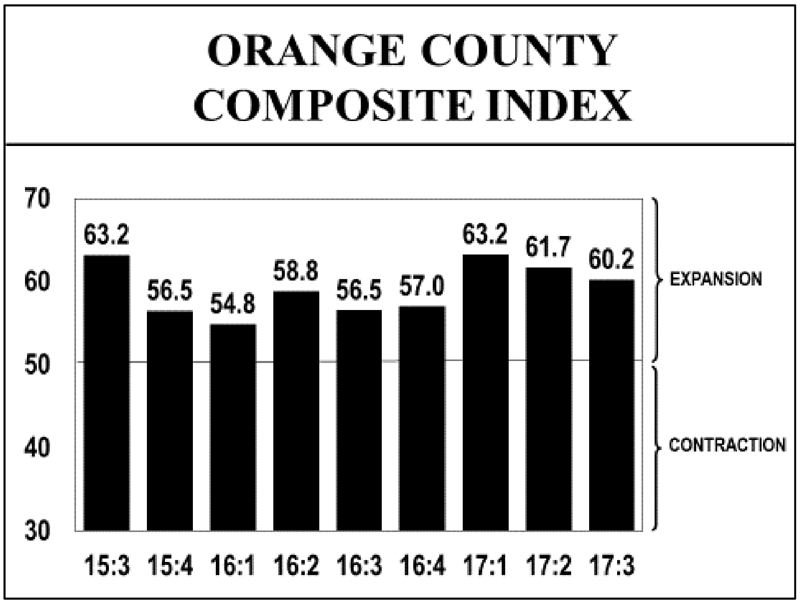
Employment: The seasonally adjusted index for employment is expected to decrease from 61.2 in the second quarter to 58.2 in the third quarter, indicating that employment in manufacturing is expected to increase at a slower rate in the third quarter. Employment is expected to increase most rapidly in the following industries: Food; Paper; Chemicals; Plastics & Rubber Products; Wood Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment; and Miscellaneous. The Furniture & Related Products industry reported an expected decrease in employment.

Employment	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
3rd Quarter of 2017	30.3	58.6	11.1	19.2	58.2
2nd Quarter of 2017	33.3	59.2	7.5	25.7	61.2
1st Quarter of 2017	22.0	62.8	15.2	6.8	53.5
4th Quarter of 2016	23.8	62.7	13.5	10.3	57.8

High-Tech Industries: The high-tech industries include the following: Computer & Electronic Products, and Aerospace Products & Parts. The high-tech industries currently employ about 346,600 employees, amounting to 27.0% of total manufacturing employment in the state. The percent of purchasing managers in the Computer & Electronic Products industry reporting higher expected production decreased sharply from 42.3% in the second quarter to 32.8% in the third quarter. Additionally the percent of purchasing managers reporting higher expected employment in these industries also decreased markedly from 52.2% in the second quarter to 24.3% in the third quarter.

Orange County's
Manufacturing Survey

The Orange County manufacturing sector's Composite Index decreased from 61.7 in the second quarter to 60.2 in the third quarter, indicating that the county's manufacturing economy is expected to grow at a lower rate in the third quarter of this year. The Orange County index is below California's index for the second consecutive quarter.



The seasonally adjusted index for production decreased from 66.2 in the second quarter to 65.8 in the third quarter, indicating that production is expected to grow at a lower rate in the third quarter of this year. This is the thirty third consecutive quarter that the production index has been above 50. The seasonally adjusted index for new orders decreased from 61.8 in the second quarter to 61.1 in the third quarter, indicating that new orders are expected to grow at a lower rate in the third quarter.

The index for the **non-durable goods industries** decreased from 61.5 in the second quarter to 57.7 in the third quarter, indicating that the growth rate in these industries is expected to be lower in the third quarter. The index for inventories of purchased materials decreased from 59.9 in the second quarter to 47.6 in the third quarter indicated a markedly lower rate of growth. The index for the **durable goods industries** decreased from 61.7 in the second quarter to 61.1 in the third quarter, indicating that the durable goods industries are expected to grow at a lower rate in the third quarter. Production and employment are expected to grow at a lower 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
MARCH	‣ California Consumer Sentiment Survey
APRIL	‣ California Purchasing Managers Survey
JUNE	‣ California Consumer Sentiment Survey ‣ Economic Forecast Update Conference for the U.S., California and Orange County
JULY	‣ California Purchasing Managers Survey
SEPTEMBER	‣ California Consumer Sentiment Survey
OCTOBER	‣ California Purchasing Managers Survey
DECEMBER	‣ Economic Forecast Conference for the U.S., California and Orange County ‣ California Consumer Sentiment Survey