1-10-2019

Manufacturing Growth Slows

Anderson Center for Economic Research

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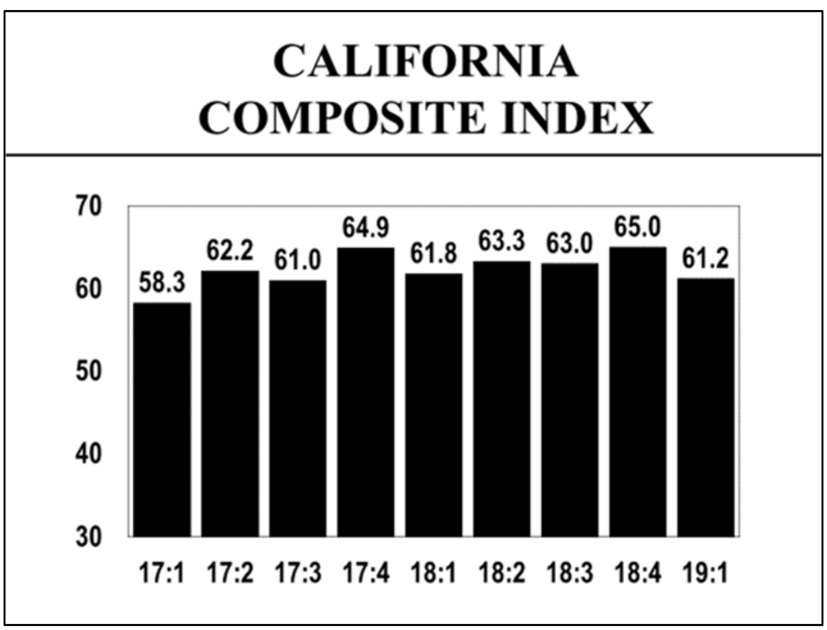
PRESS RELEASE

MANUFACTURING GROWTH SLOWS

ORANGE, CA — According to a survey of purchasing managers, the California manufacturing economy is expected to expand at a lower rate in the first quarter of 2019 compared to the fourth quarter of 2018. The California Composite Index, measuring overall manufacturing activity, decreased from 65.0 in the fourth quarter of 2018 to 61.2 in the first quarter of 2019, indicating a lower growth rate. This comes amid tariff wars and an expected slowdown in economic growth. Production, inventories of purchased materials, new orders and employment are expected to grow at a lower growth rate compared to the fourth quarter of 2018. Commodity prices are expected to rise at a slower rate, while supplier deliveries will slow at a slower rate. Respondents commented on the increase in wages and input prices across most industries. This is leading to squeezed margins and attempts to increase prices charged to consumers. Many respondents continue to lament the poor environment to do business in California and the contemplation of leaving the state for a more business friendly state.



California Manufacturing at a Glance

Composite Index	61.2	Growing at a lower rate
Production	65.0	Growing at a lower rate
Inventories of purchased materials	56.6	Growing at a lower rate
Commodity prices	76.1	Rising at a slower rate
Supplier deliveries	57.4	Slowing at a slower rate
New orders	64.1	Growing at a lower rate
Employment	57.6	Growing at a lower rate

Performance by Industry Group

The index for the **non-durable goods industries** decreased from 68.6 in the fourth quarter of 2018 to 60.3 in the first quarter of 2019, indicating a lower rate of growth in the first quarter of this year. Production, inventories of purchased materials, new orders and employment are expected to grow at a lower rate. Supplier deliveries are expected to slow at a higher rate.

The index for the **durable goods industries** decreased from 62.8 in the fourth quarter of 2018 to 61.7 in the first quarter of 2019, indicating a lower rate of growth in the first quarter of this year. Production, inventories of purchased materials, commodity prices, new orders and employment are expected to increase at a lower rate in the first quarter of this year. Supplier deliveries are expected to slow at a slower rate.

Comments by the Purchasing Managers

Transit time will continue to increase due to new freight regulations and shortage of drivers/equipment. (Food)

Raw material suppliers are raising prices...and we continue to increase our work force to handle anticipated production demands. (Textile Mill Products)

We import gloves and other safety supplies from China so there is a great deal of uncertainty. In my view and what I hear from our suppliers, finding containers to ship in has become more difficult. (Apparel)

Taxes are too high in California, not employer friendly, pricing at all-time high. We are currently looking at properties in Las Vegas for a company-wide move in 2019. (Wood Products)

Q1 is a busy time for our business. We're also impacted by the California sick leave law that causes people to miss time in January, therefore production suffers while orders increase. Upward pressure on raw materials costs will continue throughout 2019. (Paper)

Staffing becoming a real problem because of the forced wage increases. (Printing & Related Support Activities)

Things are slowing back to "normal" in terms of future orders. Prices continue to rise on raw materials, packaging and finished products. It is hard to keep up with price increases and margins have slipped a bit. We are watching our inventory carefully. (Chemicals)

We are seeing an inflationary environment in which costs, both input and labor, are rising consistently. I would not expect to see this change any time soon. (Plastics & Rubber Products)

Deliveries are slower than previous quarter and expect to be even slower next quarter due to our suppliers running out of material and supplies (too much demand due to influx of business throughout our industry). (Nonmetallic Mineral Products)

With current Section 232 tariff programs in place, the domestic steel market has reached a new equilibrium, however there are still outlying considerations, Mexico - Korea - Japan to name a few that will have to be resolved shortly that may change that equilibrium. (Primary Metals)

Material lead times have gone out and due to aluminum prices going up and "locked into contracts" it looks like profits are going down. (Fabricated Metal Products)

Over time we have seen things come and go, but I think we are in a position we can accept a hit without needing to reduce workforce and at the same time we can take a negligible increase without needing to add staff. January is price increase month so we anticipate several increases, as several have been announced already. Some are tariff related and some are not. We have seen a few price increases from the tariffs in recent months as well. Some companies are only holding prices a month at a time now where a year was the norm not so long ago. (Machinery)

New hires hard to come by but for some departments we've been fortunate to locate people. These are interesting days trying to figure out tariff charges here and there. It's difficult quoting electronic components where tariff costs are added after the orders are placed. It'll probably all end up fine later but in the meantime, it's messy. (Computer & Electronic Products)

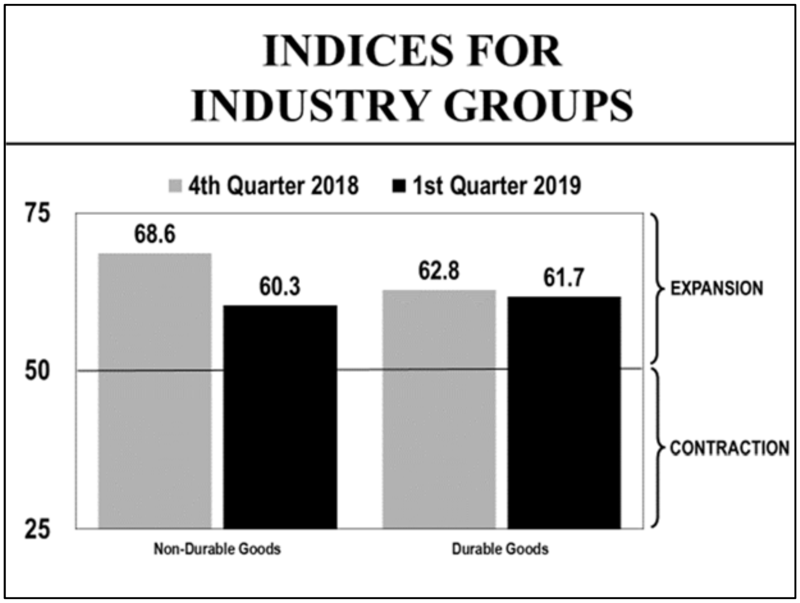
Electronic component allocations causing us to pay premiums for expedited delivery. Seeing a slowdown in customer purchases from China, affected by both currency exchange rates and trade war. (Electrical Equipment, Appliance & Components)

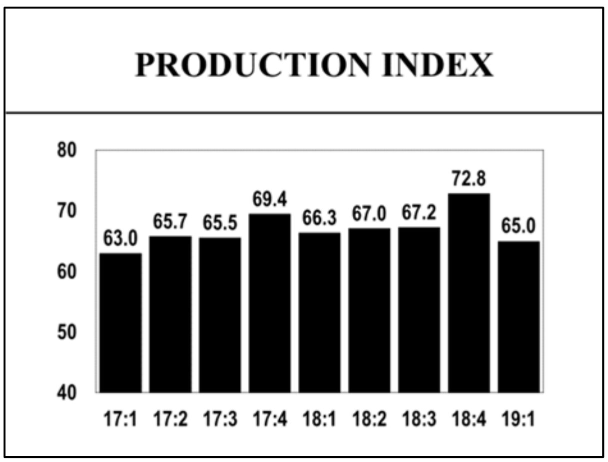
More manufactures are applying the China tariffs to our product shipping from China. Steel products as well as soft goods. Those suppliers who can move manufacturing to Vietnam are doing so to avoid the tariffs. (Transportation Equipment)

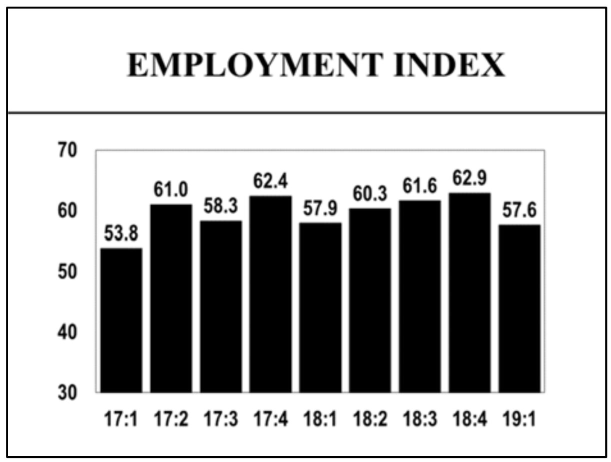
Future interest rates increases and tariff uncertainty are causing our customers concern over a sharp economic slowdown going into 2019. (Furniture & Related Products)

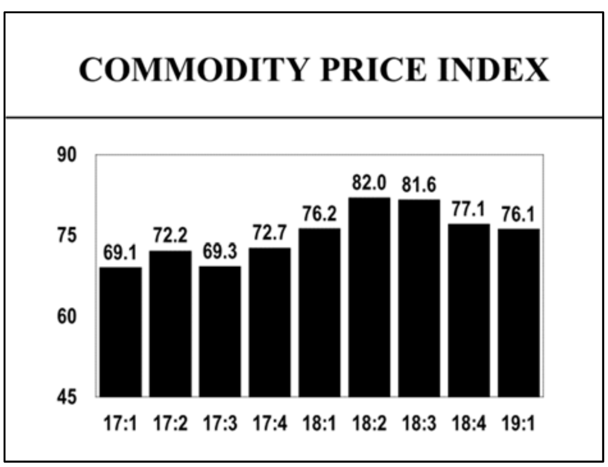
The future is looking pretty bad for businesses after this last election, the new Governor will be raising taxes, adding more regulations and higher gas prices. All these things add up to higher costs for everyone which will hurt our already fragile economy. (Miscellaneous)

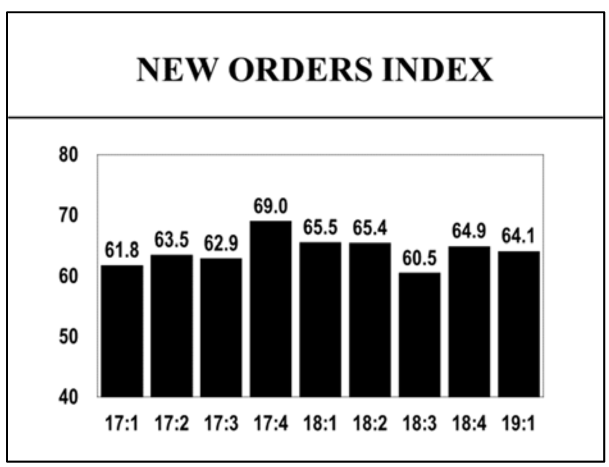
Supplier lead times are increasing and capacity is constrained while skilled labor takes time to find and train. This is expect to impact delivery performance in the near time but we expect it to improve in Q1. (Aerospace Products & Parts)


INDICES FOR
INDUSTRY GROUPS
4th Quarter 2018
1st Quarter 2019
75
50
25
68.6
60.3
62.8
61.7
EXPANSION
CONTRACTION
Non-Durable Goods
Durable Goods


PRODUCTION INDEX
80
70
60
50
40
63.0
65.7
65.5
69.4
66.3
67.0
67.2
72.8
65.0
17:1
17:2
17:3
17:4
18:1
18:2
18:3
18:4
19:1


EMPLOYMENT INDEX
70
60
50
40
30
53.8
61.0
58.3
62.4
57.9
60.3
61.6
62.9
57.6
17:1
17:2
17:3
17:4
18:1
18:2
18:3
18:4
19:1


COMMODITY PRICE INDEX
90
75
60
45
69.1
72.2
69.3
72.7
76.2
82.0
81.6
77.1
76.1
17:1
17:2
17:3
17:4
18:1
18:2
18:3
18:4
19:1


NEW ORDERS INDEX
80
70
60
50
40
61.8
63.5
62.9
69.0
65.5
65.4
60.5
64.9
64.1
17:1
17:2
17:3
17:4
18:1
18:2
18:3
18:4
19:1

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 First 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 decrease from 72.8 in the fourth quarter of 2018 to 65.0 in the first quarter of 2019, indicating that production is expected to increase at a lower rate in the first quarter of this year. This is the thirty ninth consecutive quarter that the production index has been above 50. Production is expected to increase most rapidly in the following industries: Textile Mill Products; Chemicals; Plastics & Rubber Products; Wood Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Transportation Equipment; and Miscellaneous. No industry reported an expected decrease in production.

Production	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
1st Quarter of 2019	42.5	43.0	14.4	28.1	65.0
4th Quarter of 2018	50.6	33.8	15.5	35.1	72.8
3rd Quarter of 2018	51.2	34.7	14.1	37.1	67.2
2nd Quarter of 2018	56.3	30.9	12.8	43.6	67.0

Inventories of Purchased Materials: The seasonally adjusted index for inventories of purchased materials is expected to decrease from 64.3 in the fourth quarter of 2018 to 56.6 in the first quarter of 2019, indicating that inventories are expected to increase at a lower rate in the first quarter of this year. Inventories of purchased materials are expected to increase most rapidly in the following industries: Textile Mill Products; Paper; Plastics & Rubber Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; and Transportation Equipment. The Food and the Printing & Related Support Activities industries have reported an expected decrease in inventories of purchased materials.

Inventories of Purchased Materials	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
1st Quarter of 2019	28.1	55.1	16.8	11.2	56.6
4th Quarter of 2018	38.0	44.0	17.9	20.1	64.3
3rd Quarter of 2018	39.2	41.7	19.0	20.2	57.9
2nd Quarter of 2018	38.6	43.3	18.1	20.4	57.4

Commodity Prices: The seasonally unadjusted index for commodity prices is expected to decrease from 77.1 in the fourth quarter of 2018 to 76.1 in the first quarter of 2019, indicating that commodity prices are expected to rise at a slightly lower rate in the first 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; 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	% Higher	% Same	% Lower	Net	Index
1st Quarter of 2019	57.9	36.4	5.7	52.2	76.1
4th Quarter of 2018	62.4	29.5	8.1	54.3	77.1
3rd Quarter of 2018	67.2	28.8	4.0	63.2	81.6
2nd Quarter of 2018	66.1	31.8	2.1	64.0	82.0

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 decrease from 58.1 in the fourth quarter of 2018 to 57.4 in the first quarter of 2019, indicating that supplier deliveries are expected to be slower in the first quarter of this year. Supplier deliveries are expected to be slowest in the following industries: Food; Chemicals; Wood Products; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment; and Furniture & Related Products. No industry reported an expectation of faster supplier deliveries.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Seasonally Adjusted Index
1st Quarter of 2019	21.8	70.5	7.7	14.1	57.4
4th Quarter of 2018	27.5	62.6	9.8	17.7	58.1
3rd Quarter of 2018	34.7	59.3	6.0	28.7	64.7
2nd Quarter of 2018	27.0	64.0	9.0	18.0	59.1

New Orders: The seasonally adjusted index for new orders is expected to decrease from 64.9 in the fourth quarter of 2018 to 64.1 in the first quarter 2019, indicating that new orders are expected to increase at a lower rate in the first quarter of this year. New orders are expected to increase most rapidly in the following industries: Food; Textile Mill Products; Paper; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Transportation Equipment; and Miscellaneous. The Furniture & Related Products industry reported an expected decrease in new orders.

New Orders	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
1st Quarter of 2019	44.0	39.0	17.1	26.9	64.1
4th Quarter of 2018	42.3	36.3	21.4	20.9	64.9
3rd Quarter of 2018	41.7	39.3	19.0	22.7	60.5
2nd Quarter of 2018	51.8	36.4	11.8	29.5	65.4

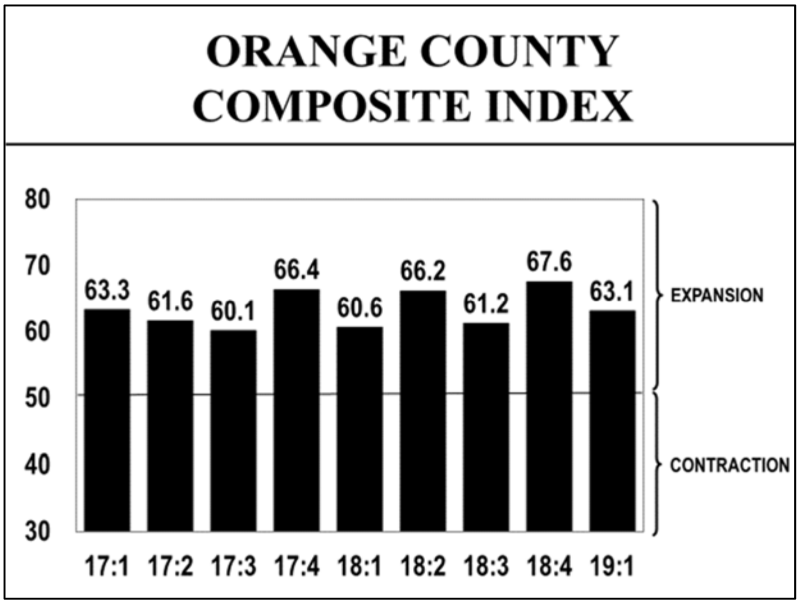
Employment: The seasonally adjusted index for employment is expected to decrease from 62.9 in the fourth quarter of 2018 to 57.6 in the first quarter of 2019, indicating that employment in manufacturing is not expected to grow as much as it did in the fourth quarter of 2018. Employment is expected to increase most rapidly in the following industries: Paper; Chemicals; Plastics & Rubber Products; Wood Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Computer & Electronic Products; Transportation Equipment; and Miscellaneous. The Food and the Printing & Related Support Activities industries reported an expected decrease in employment.

Employment	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
1st Quarter of 2019	27.0	60.4	12.6	14.4	57.6
4th Quarter of 2018	31.3	57.7	11.1	20.2	62.9
3rd Quarter of 2018	38.3	49.4	12.3	26.0	61.6
2nd Quarter of 2018	35.2	53.7	11.0	24.2	60.3

High-Tech Industries: The high-tech industries include the following: Computer & Electronic Products, and Aerospace Products & Parts. The high-tech industries currently employ about 363,700 employees, amounting to 27.6% of total manufacturing employment in the state. The percent of purchasing managers in the Computer & Electronic Products industry reporting higher expected production increased from 39.5% in the fourth quarter of 2018 to 46.3% in the first quarter of this year. Additionally, the percent of purchasing managers reporting higher expected employment in these industries decreased from 28.4% in the fourth quarter of 2018 to 27.3% in the first quarter of this year.

Orange County's
Manufacturing Survey

The Orange County manufacturing sector's Composite Index decreased from 67.6 in the fourth quarter of 2018 to 63.1 in the first quarter of 2019, indicating that the county's manufacturing economy is expected to grow at a slower rate in the first quarter of this year. The Orange County index is still above California's index.



The seasonally adjusted index for production decreased from 72.5 in the fourth quarter of 2018 to 65.9 in the first quarter of 2019, indicating that production is expected to grow at a lower rate in the first quarter of this year. This is the thirty ninth consecutive quarter that the production index has been above 50. The seasonally adjusted index for new orders also decreased from 68.7 in the fourth quarter to 64.8 in the first quarter, indicating that new orders are expected to grow at a lower rate in the first quarter of this year.

The index for the **non-durable goods industries** decreased from 74.2 in the fourth quarter of 2018 to 66.0 in the first quarter of 2019, indicating that the growth rate in these industries is expected to be substantially lower in the first quarter of this year. The index for production decreased from 82.8 in the fourth quarter to 67.1 in the first quarter indicating a substantially lower rate of growth in the first quarter of this year. The index for the **durable goods industries** decreased from 65.3 in the fourth quarter to 62.0 in the first quarter, indicating that the durable goods industries are expected to grow at a lower rate in the first quarter of this year. Production, new orders, inventories of purchased materials, 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