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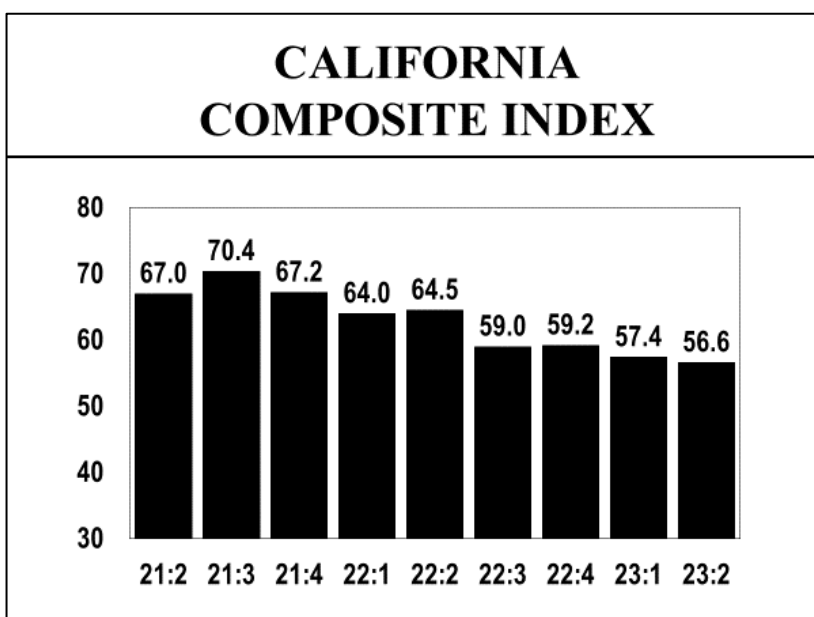
Anderson Center for Economic Research

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PRESS RELEASE

THE HI-TECH INDUSTRIES PUSH THE MANUFACTURING SECTOR DOWN

ORANGE, CA — Based on a survey of purchasing managers, the California Composite Index, measuring overall manufacturing activity in the state, decreased from 57.4 in the first quarter to 56.6 in the second quarter, indicating that the manufacturing sector is expected to grow at a lower rate in the second quarter. “Purchasing managers see supply chain issues easing, and raw material prices moderating/declining. Lead times have improved. They note how the severe weather has impacted their business. Concerns are voiced about higher energy costs and the California administration’s policy to prevent drilling for new wells. Difficulty in finding qualified workers is still a major concern in many industries. Many purchasing managers wrote that business is good,” said Dr. Raymond Sfeir, director of the purchasing managers’ survey. Production is expected to grow at a slightly lower rate in the second quarter, and commodity prices are expected to rise at a higher rate, while supplier deliveries will not be slower. New orders are expected to grow at a higher rate. The high-tech sector is expected to perform worse than the rest of the manufacturing sectors, leading to a lower growth rate for the manufacturing sector as a whole.



California Manufacturing at a Glance

Composite Index	56.6	Increasing at a lower rate
Production	63.3	Increasing at the same rate
Inventories of purchased materials	53.8	Increasing at a lower rate
Commodity prices	71.1	Rising at a higher rate
Supplier deliveries	50.0	Slowing at a slower rate
New orders	56.7	Increasing at a higher rate
Employment	53.0	Increasing at a higher rate

Performance by Industry Group

The index for the **non-durable goods industries** increased from 55.6 in the first quarter to 58.0 in the second quarter, indicating that these industries are expanding at a higher rate. Production, commodity prices, new orders and employment are expected to grow at a higher rate. Supplier deliveries are expected to be faster in the second quarter. And inventories of purchased materials are expected to grow at a lower rate.

The **high-tech industries** include the following: Computer & Electronic Products, and Aerospace Products & Parts. The high-tech industries currently employ about 380,800 employees, amounting to 28.6% of total manufacturing employment in the state. The index for the high-tech industries decreased from 60.6 in the first quarter to 55.4 in the second quarter, indicating a lower growth rate in the second quarter. This is the second consecutive quarter of a lower index. Production is expected to grow at a substantially lower rate. Commodity prices, new orders and employment are expected to grow at a lower rate. New orders are also expected to grow at a lower rate. Supplier deliveries are expected to be slowing at a lower rate for the fourth consecutive quarter.

The index for the **durable goods industries other than high-tech** increased from 54.3 in the first quarter to 56.6 in the second quarter, indicating a higher growth rate in these industries. Production, inventories of purchased materials, commodity prices, and new orders are expected to grow at a higher rate. Supplier deliveries are not expected to be slower as the index reaches a value of 50.1.

Comments by the Purchasing Managers

Import container pricing from Asia is dramatically lower than at any time in the past 4 years. Energy cost is a new issue in Southern California. Transportation infrastructure is deteriorating in California. (Food)

We have not seen increases in pricing for the new orders in the last 8 weeks (PPI), which is a huge relief. The only remaining concern is a negative development with the US banks, which provide financing for our inventory needs. (Textile Mill Products)

Suppliers have low inventory in our industry. (Apparel)

Commodities prices will continue to correct downward as consumer purchases soften. Inflation will persist and economic growth will recede as we enter a period of stagflation. (Paper)

Energy prices are still affecting profitability. We have a glimmer of hope that our supply chain will be correcting itself. But we are unexpectedly in a very slow period that will unfortunately carry over into Q2. (Printing & Related Support Activities)

Directed by Governor Newsom the office of CALGEM is waging an advocacy program to eliminate new well drilling in the Oil and Gas sector. This will have profound implications in this industry. Sales and personnel in this field have already plummeted. We anticipate the prospect of 50% layoffs and the potential for closing the business. The trickle-down effect from these actions will be profound. The sad truth is that we are going to promote oil from foreign countries to replace California production. This action will impact even Orange County. (Petroleum & Coal products)

Raw material deliveries have stabilized but material costs have increased beyond projections. Hiring has been primarily frozen until the determination of economic conditions have been evaluated for impact to business. More candidates are available, although skills gaps with candidates are still present. (Chemicals)

We continue to see inflation caused by a number of factors. The war in Ukraine and raw material shortages. We expect a slowdown in sales but it should be moderate. (Plastics & Rubber Products)

The overall business climate is running in neutral. Most have a cautious/positive look towards Q2. Factors adding to the cautious outlook are the geopolitical landscape, as well as US economic pressures, interest rates and a potential recession. (Wood Products)

Since we are tied to civil construction that typically has long lead times, one quarter of time does not make much difference for our business. We do see our suppliers changing as supply chain problems ease, but inflation seems to increase. Steel prices are down which is big for us, supplies are more available with shorter lead times which is great. But other supplies are not coming down in price even if more available. It is becoming easier to hire laborers which helps us short term, engineers and skilled workers are still hard to hire. (Nonmetallic Mineral Products)

Backlog means deliveries are slow but it won't change. (Primary Metals)

Southern California Gas pricing is a very big variable in our vendor purchased goods item. Shortage of drivers to deliver purchased goods is also impacting our day-to-day operations. (Fabricated Metal Products)

Stocked up on inventories last quarter. Purchasing inventory this quarter will be lighter. Orders continue to come in at a slower rate than last quarter. (Machinery)

Price volatility is an issue, with price increases accelerating everywhere, except shipping which has returned to pre pandemic pricing, Pacific containers have dropped from \$20,300 to \$3,200. (Computer & Electronic Products)

Business is picking up. Hoping for better profits after better sales and higher price. (Electrical Equipment, Appliance & Components)

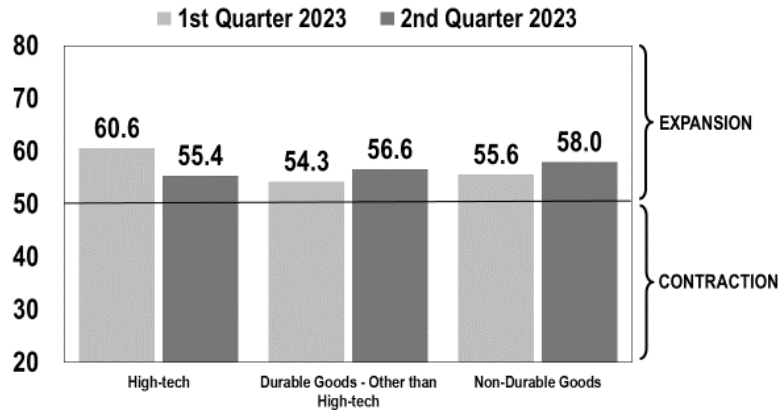
While the number of price increases from various manufacturers has slowed, the selective increases that are still coming in are in the high single digit to low single digit amounts. (Transportation Equipment)

The furniture industry has seen a significant slowdown in business. Many manufacturers are quoting pre-covid lead times. We have also received the first price decreases we have seen in several years in lumber, foam and metal components. (Furniture & Related Products)

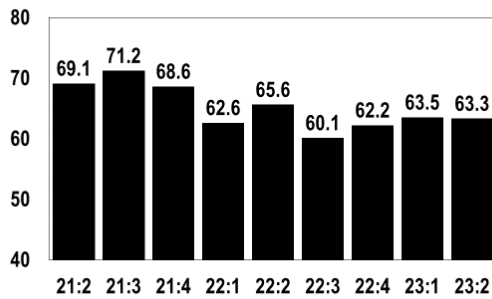
Supply chains have stabilized, ocean freight delivery times and cost have come down. Some of our raw material cost in the oil industry have come down, but other costs (corrugated, chip board, labels) are increasing at a lower rate but still increasing and we believe it is due in large part to labor costs in California, Los Angeles in particular, that are still rising. (Miscellaneous)

Need to hire but it is hard to fill spots. (Aerospace Products & Parts)

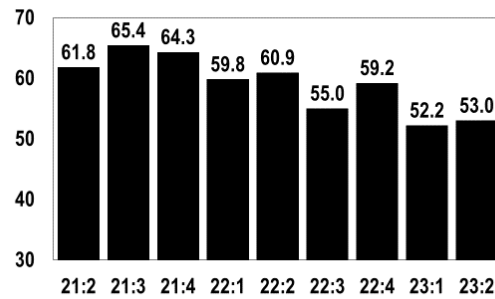
INDICES FOR INDUSTRY GROUPS



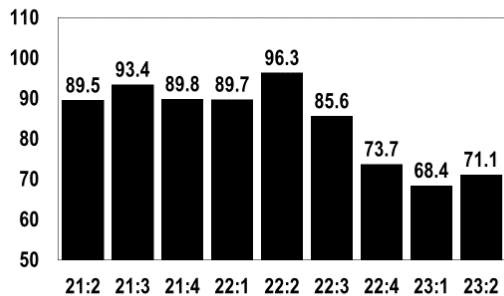
PRODUCTION INDEX



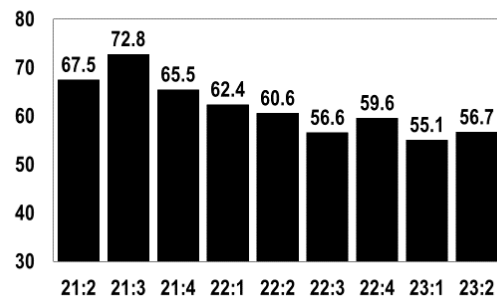
EMPLOYMENT INDEX



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 2023

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 63.5 in the first quarter to 63.3 in the second quarter, indicating that production is expected to grow at a slightly lower rate in the second quarter. This is the twelfth consecutive quarter that the production index has been above 50. Production is expected to increase most rapidly in the following industries: Food; Beverage & Tobacco; Textile Mill Products; Printing & Related Support Activities; Petroleum & Coal Products; Chemicals; Plastics & Rubber Products; Wood Products; Fabricated Metal Products; 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 expected decrease in production.

Production	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2023	47.5	39.0	13.5	33.9	63.3
1 st Quarter of 2023	43.1	38.5	18.4	24.6	63.5
4 th Quarter of 2022	37.3	42.2	20.5	16.9	62.2
3 rd Quarter of 2022	40.3	42.7	17.1	23.2	60.1

Inventories of Purchased Materials: The seasonally adjusted index for inventories of purchased materials is expected to decrease from 63.2 in the first quarter to 53.8 in the second quarter, indicating that inventories are expected to increase at a lower rate in the second quarter. Inventories of purchased materials are expected to increase most rapidly in the following industries: Food; Beverage & Tobacco; Fabricated Metal Products; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment (other than Aerospace Products & Parts); and Miscellaneous. Inventories of purchased materials are expected to decrease most rapidly in the following industries: Apparel; Paper; Printing & Related Support Activities; Chemicals; Wood Products; Machinery; and Furniture & Related Products.

Inventories of Purchased Materials	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2023	34.1	44.0	21.9	12.2	53.8
1 st Quarter of 2023	43.1	38.5	18.4	24.6	63.2
4 th Quarter of 2022	31.3	41.8	26.9	4.4	55.4
3 rd Quarter of 2022	33.5	43.7	22.8	10.7	53.6

Commodity Prices: The seasonally unadjusted index for commodity prices is expected to increase from 68.4 in the first quarter to 71.1 in the second quarter, indicating that commodity prices are expected to rise at a higher rate in the second quarter. Commodity prices are expected to increase most rapidly in the following industries: Food; Textile Mill Products; Printing & Related Support Activities; Chemicals; Plastics & Rubber 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. The Apparel industry reported an expected decrease in commodity prices.

Commodity Prices	% Higher	% Same	% Lower	Net	Index
2 nd Quarter of 2023	50.3	41.7	8.1	42.2	71.1
1 st Quarter of 2023	52.3	32.1	15.6	36.8	68.4
4 th Quarter of 2022	60.6	26.3	13.1	47.4	73.7
3 rd Quarter of 2022	76.1	18.9	5.0	71.1	85.6

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 decrease from 55.4 in the first quarter to 50.0 in the second quarter, indicating that supplier deliveries are not expected to be slower in the second quarter. Supplier deliveries are expected to be slowest in the following industries: Primary Metals; Computer & Electronic Products; Electrical Equipment, Appliance & Components; Transportation Equipment (other than Aerospace Products & Parts); Aerospace Products & Parts; and Miscellaneous. Supplier deliveries are expected to be fastest in the following industries: Food; Textile Mill Products; Paper; Chemicals; Fabricated Metal Products; Electrical Equipment, Appliance & Components; and Furniture & Related Products.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Seasonally Adjusted Index
2 nd Quarter of 2023	16.5	67.8	15.7	0.8	50.0
1 st Quarter of 2023	25.1	59.3	15.6	9.5	55.4
4 th Quarter of 2022	28.0	60.9	11.1	16.9	57.9
3 rd Quarter of 2022	45.8	46.5	7.7	38.1	69.4

New Orders: The seasonally adjusted index for new orders is expected to increase from 55.1 in the first quarter to 56.7 in the second quarter, indicating that new orders are expected to increase at a higher rate in the second quarter. New orders are expected to increase most rapidly in the following industries: Food; Textile Mill Products; Petroleum & Coal Products; Chemicals; Plastics & Rubber Products; Wood Products; Fabricated Metal Products; Machinery; Computer & Electronic Products; Transportation Equipment (other than Aerospace Products & Parts); and Miscellaneous. New orders are expected to decrease most rapidly in the following industries: Apparel; and Paper.

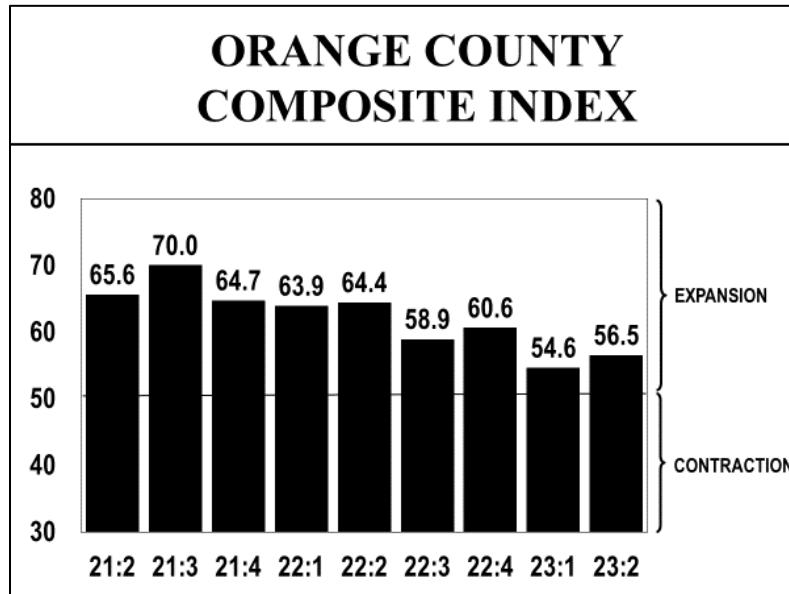
New Orders	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2023	38.6	42.6	18.8	19.8	56.7
1 st Quarter of 2023	34.7	39.7	25.6	9.1	55.1
4 th Quarter of 2022	34.7	42.6	22.6	12.1	59.6
3 rd Quarter of 2022	34.6	46.1	19.4	15.2	56.6

Employment: The seasonally adjusted index for employment is expected to increase from 52.2 in the first quarter to 53.0 in the second quarter, indicating that employment in manufacturing is expected to improve in the second quarter. Employment is expected to increase most rapidly in the following industries: Food; Beverage & Tobacco; Nonmetallic Mineral Products; Fabricated Metal Products; Aerospace Products & Parts; and Furniture & Related Products. The Computer & Electronic Products industry reported an expected decrease in employment.

Employment	% Higher	% Same	% Lower	Net	Seasonally Adjusted Index
2 nd Quarter of 2023	22.3	63.5	14.2	8.0	53.0
1 st Quarter of 2023	22.9	57.7	19.4	3.5	52.2
4 th Quarter of 2022	26.0	62.6	11.4	14.6	59.2
3 rd Quarter of 2022	27.4	57.9	14.8	12.6	55.0

Orange County's Manufacturing Survey

The Orange County manufacturing sector's Composite Index increased from 54.6 in the first quarter to 56.5 in the second quarter, indicating that the county's manufacturing economy is expected to expand at a higher rate in the second quarter.



The seasonally adjusted index for production increased from 61.1 in the first quarter to 62.8 in the second quarter, indicating that production is expected to increase at a higher rate in the second quarter. The seasonally adjusted index for inventories of purchased materials increased from 54.2 to 57.9 indicating that inventories will grow at a higher rate. The supplier deliveries index dropped from 47.8 to 47.4 indicating that deliveries will continue to be faster in the second quarter. New orders and employment are expected to grow at a higher rate. The seasonally unadjusted index for commodity prices is expected to decrease from 70.0 to 67.4 indicating that commodity prices are expected to rise at a lower rate.

The index for the **non-durable goods industries** decreased from 53.4 in the first quarter to 52.0 in the second quarter, indicating that these industries are expected to expand at a lower rate in the second quarter. The index for production decreased from 58.3 to 57.3, indicating that production is expected to increase at a lower rate. The commodity prices index decreased from 80.1 to 62.8 indicating that commodity prices are expected to increase at a much lower rate in the second quarter. The index for the **high-tech industries** increased from 63.3 to 64.0, indicating that these industries are expected to expand at a higher rate. The index for new orders decreased from 65.5 to 62.7 indicating that new orders will increase at a lower rate. The index for employment increased from 67.8 to 71.3 indicating that employment is expected to improve. The index for the **durable goods industries other than high-tech** increased from 51.2 to 55.7 indicating that the durable goods industries other than high-tech are expected to expand at a higher rate. Production, inventories of purchased materials, commodity prices, new orders and employment are all expected to grow at a higher rate 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

APRIL

- › California Purchasing Managers Survey

JUNE

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

JULY

- › California Purchasing Managers Survey

OCTOBER

- › California Purchasing Managers Survey

DECEMBER

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