IAR'S INLAND EMPIRE REPORT ON BUSINESS Prepared by: The Institute of Applied Research Housed in CSUSB's Jack H. Brown College of Business and Public Administration Report for March 2020

Sponsor: San Bernardino County Economic Development Agency Riverside County Economic Development Agency

Coronavirus Crisis

CONTEXT FOR THIS REPORT. The first case of COVID-19 in California was confirmed on January 20, 2020, and the first confirmed case of locally acquired COVID-19 in the Inland Empire (Riverside and San Bernardino Counties) was March 7. The governor imposed a mandatory stay-at-home order on March 19. As of the writing of this report, there are a total of 8,548 positive cases and 181 deaths in California (https://www.worldometers.info/coronavirus/country/us/). Riverside and San Bernardino Counties now have a combined 554 cases, with 19 deaths. Residents have been advised that they need to isolate in their homes till April 30 (or perhaps longer), and businesses have closed or curbed their activity.

Not surprisingly, University of Michigan's U.S. Consumer Sentiment Index published 3/27/20 fell to the lowest level in more than 3 years, with more declines likely as the anticipated surge in COVID-19 cases occurs. It is in this context that we release this month's economic forecast based on data collected between March 23 and March 30, 2020 – after business were ordered to close their doors to help "flatten the curve" and keep people healthy and safe.

"According to Dr. Barbara Sirotnik (Director, Institute of Applied Research) and Lori Aldana (Project Coordinator, Institute of Applied Research), "This month's Inland Empire Purchasing Managers' Index (PMI) registered a huge drop to 43.3 from February's 57.0. This is the largest drop since December 2015 when the index plunged to 42.1 from the previous month's 52.3. Other than a short period in 2015, the only time the index has registered consistently below this month's 43.3 was during the recessionary period from late 2007 to 2009."

"This month's low figure is not surprising to any of us, considering the pandemic ravaging the world. Non-essential businesses are shuttered and residents in most states are ordered to stay home. Some people are able to work from home and are continuing to get a paycheck. They will keep buying (assuming the products can be delivered). But others have been laid off and are barely holding on, waiting for the federal government to issue the checks that have been promised in the recently passed \$2 trillion coronavirus stimulus bill. Some people are wondering how they will get by, with sick and vacation pay being used up. Some people have consistently lived "paycheck to paycheck" and now find themselves with no paycheck at all. These people don't have the funds to buy the products manufactured by our respondents."

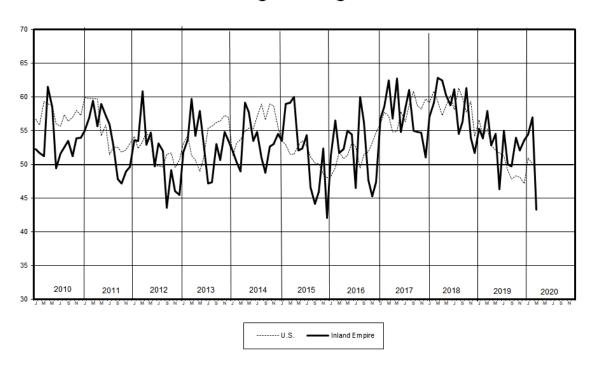
"Thus, it is not surprising that this month, four of the key indicators in the PMI (the Production, New Orders, Inventory, and Employment Indices) have dropped significantly below the 50% mark. The Production Index is now 33.3 (down from 66.7, and the second lowest figure since the local PMI was debuted in 1995). The New Orders Index dropped to 31.5 (a decrease from 65.0, and a figure equal to the all-time low figure from October 2001). The Employment Index is now at 38.9 (a drop from 48.3), and Inventory decreased from 48.3 to 44.4 this month. The Supplier Deliveries have slowed significantly, changing from 56.7 to 68.5 this month."

"Purchasing Managers are clearly less than enthusiastic about the local economy for the coming quarter. Again, this is not a surprise. Not a single Purchasing Manager foresaw a strengthening of the local economy in the coming quarter, a situation which has only occurred four times since the inception of the report. This month, 96% of Purchasing Managers predicted a weaker local economy in the upcoming three months, with the other 4% anticipating that the local economy will remain unchanged.

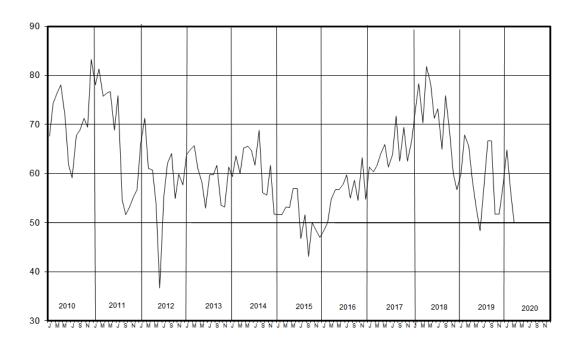
Following is a summary of highlights from this month's report:

March 2020 Business Survey at a Glance									
	Series	Index	Direction from	Rate of Change	Trend				
	Last Month	This Month	50	from Last Index	Months				
Local PMI	57.0	43.3	Contracting	From Growing	1				
Commodity Prices	56.7	50.0	Unchanged	From Increasing	9				
Production	66.7	33.3	Contracting	From Growing	1				
New Orders	65.0	31.5	Contracting	From Growing	1				
Inventory	48.3	44.4	Decreasing	Faster	3				
Employment	48.3	38.9	Contracting	Faster	2				
Supplier Deliveries	56.7	68.5	Slowing	Faster	6				
Purchasing Managers' Confidence in the State of the Local Economy									
% Stronger	15%	0%							
% Same	62%	4%							
% Weaker	23%	96%							

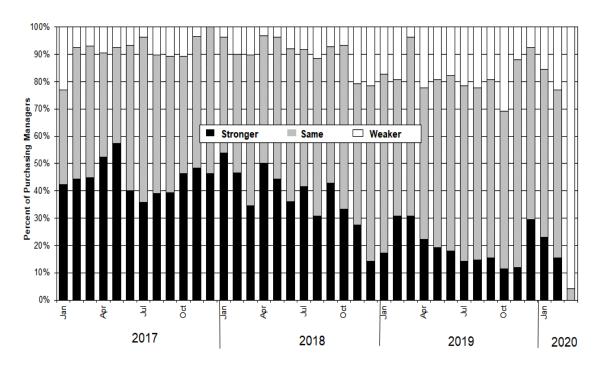
Purchasing Managers' Index



Commodity Prices



State of the Local Economy



STATE OF THE ECONOMY: DATA FROM 3/2019 THROUGH 3/2020

	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Weaker	4	22	19	18	22	22	19	31	12	7	15	23	96
Same	65	56	62	64	64	63	65	58	76	63	62	62	4
Stronger	31	22	19	18	14	15	16	11	12	30	23	15	0

This month, only a few respondents had positive comments regarding the business outlook for their company or industry (and for the most part, those respondents produce products deemed "essential" during this global crisis). Comments included:

- "So far so good, we are still at full production."
- "We have the largest orders in the company history."
- "Business with our medical customers is obviously extremely strong. However, we are also seeing strength in several other industries. I would think many companies are doing their best to build inventories in the event supply gets scarce."
- "Our business has not been impacted by the shutdown for the pandemic...only the rain impacts the demand for our product."

- "Our company has been classified as an essential business. We are in full production and receiving orders form most of our customers. We are having issues getting safety supplies for our employees such as masks, and gloves. We do have enough inventory of these items to allow us to continue operations for at least 1 month. At that time, hopefully, supplies will be available."
- "We have orders for Infectious Disease Control Shields and Goggles."
- "China is back in business. We are seeing new orders once again from our Chinese customers. Europe is about the same as last month."

Mixed and/or cautionary comments included:

- "We have laid off our crew due to the Covid-19 virus."
- "I've been home for the last couple weeks. Emails and the usual requests for quotes and new orders have slowed up a lot. I suspect that new orders and shipments will be lower than February. The rest of the shop is still working."
- "The initial threat of COVID-19 gave us concern about inventory of parts that might be connected to China imports. We obtained a loan in March in order to purchase 6 months' supply of those parts."
- "As a DOD contractor we are trying to remain open during the corona virus situation."
- "Because of the stay-at-home order we have been forced to let some workers go and are still working with a skeleton crew. We do support essential businesses, so we are still working to help and support them with signs and notices."
- "Very Slow. Expecting half of the normal business."
- "We have reduced all hours during this time. We are still considered an essential business, but we have lost over 50% of our business in Automotive."
- "We are at 20% production at this time due to Covid-19, we have seen retail products we make down 95%. We haven't laid off any of our employees at this time."
- "Obviously, with the COVID-19 much of our industrial and commercial business
 has slowed to a minimum. Our aerospace business has a significant backlog
 through 2023, so we are producing what is considered "essential" work
 addressing that backlog. Without clear federal action at this point in time, much
 still remains up in the air."
- "Business is slowing due to current restrictions."

- "Of course, the current situation on the corona virus is affecting our operation.
 Working from home."
- "COVID-19 affecting outside the U.S orders."
- "Incoming work has decreased due to the Covid-19 Pandemic."
- "No transit from Asia."

Special Questions: This month we included a few special questions regarding the challenges of the Inland Empire business community during this crisis. Following is a summary of responses to those questions:

1) Are you able to have your employees work remotely to minimize exposure to COVID-19?

None of the respondents indicated that "all or most" employees are able to work remotely. About half (52%) said that *some* employees can work remotely, and 48% said that it is not possible to have employees working remotely.

Comments from those that said some employees (primarily support staff) are able to work remotely:

- "In my position I can fully function working remotely."
- "80% of our work force is required to operate and maintain our chemical processing plant. Some of the support staff can work from home."
- "As a manufacturer we are not able to have 100% of our employees work remotely."
- "Managerial functions can be done remotely however our business requires personnel to be onsite."
- "Non-essential office personnel are working from home."
- "Not all work can be done remotely -- we still need people in the business."
- "Office (myself) is working remotely from home. Part-time shop employee continues to work same hours, approximately 16 hrs/week."
- "Our production team must be here but we do have half of our sales team working remotely."
- "Some of the key rolls can work remotely, but we haven't done this yet."

- "We are a manufacturer and make lots of stuff by hand. The people are fairly separated at the workstations and are maintaining separation at lunch and breaks. I can do a bit of work from home and will try to do so as I am very much at risk due to autoimmune drugs."
- "We are a manufacturer, so the majority of our staff are in production which cannot be done remotely."
- "We have a very limited crew because we are in the production and manufacturing sector. We cannot shut down completely. Phone calls, emails, and business in general have dropped so much we are able to keep a very small number of employees in the office to continue with work."

Comments from those that indicated that working remotely is not possible (primarily due to the need to be onsite to work machinery):

- "While some sales staff could work remotely, we need assembly, machine operators and staff here for management."
- "All employees are essential to the daily operations some older employees in the office have rotating hours."
- "We are a food manufacturing facility. It would be impossible."
- "We are a manufacturer that needs employees to operate machinery."
- "We are a manufacturer, and our jobs are "hands on."
- "We are a manufacturing company. It would not be possible for employees in our warehouse to work remotely. They use a variety of large tools such as table saws, chop saws, etc. and our products are very large 10' tall not something that can be done outside of the warehouse environment. Our office workers are working remotely as much as possible."
- "We are a manufacturing facility and cannot work from home."
- "We are a small manufacturer. Factory employees has to come to work. We do not have our Office technology in position to work remotely."
- "We are small company and the business is mostly thru internet. But the products are done in our company. We do not have contact with the public. Only UPS and Fed Ex comes to pick up or drop things that we need. Therefore we can still work with precautions."
- 2) What percent of your workers/employees have you already laid off? The vast majority of respondents (82%) indicated that they have not experienced any

layoffs as yet. Another 11% said that less than 10% of the workforce has been laid off. Only 2 respondents said that 40% or more of their workforce had been laid off.

3) What percent of your workers/employees are you considering laying off? Most respondents (80%) indicated that they are not considering layoffs at this time. Only three respondents indicated that they are considering a large amount of layoffs (40% or more of the workforce).

Those who have laid off workers (or are considering doing so) are uncertain as to whether they will be able to continue paying those laid off workers.

4) Are you considering shutting down your business in the next 2.5 months? For the most part, businesses are NOT considering shutting down. Nearly three-quarters (74%) said they don't think there will be a shutdown, and another 7% said it was possible that there would be a *temporary* shutdown. Finally, 11% said "who knows?"

In summary, anyone who believes they can construct an accurate forecast of the economy is fooling themselves. There are simply too many variables in play to be able to predict when the epidemic will ease, allowing business to return to normal. But IAR will continue to provide the most up-to-date data on business conditions that we can.

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