

The Current Sentiment of the Global Electronics Manufacturing Supply Chain

Monitoring the Pulse of the Global Electronics Industry

July 2022



Executive Summary



> Supply Chain Constraints are Showing Small Signs of Improvement

- Both inventory available to customers (IAC Index) and the inventory available from suppliers (IAFS Index) improved somewhat this month. The current conditions indexes remain in contractionary territory for both suggesting current inventories remain tight. However, the 6-month outlook index for both have now moved into expansionary territory this month, indicating respondents expect inventory levels to expand in the coming months.
- The electronics manufacturing supply chain reports that backlogs continue to expand, but the Backlog Index declined this month. The Backlog Outlook Index fell its lowest level since the survey began. At 103, the index remains narrowly in expansionary territory.
- The Shipments Outlook Index increased to 120, suggesting manufacturers expect shipments to expand over the next 6 months. Both the current Capacity Utilization Index and the Capacity Utilization Outlook Index improved this month and both remain definitively in expansionary territory.

> Many Firms Have Raised Prices Because of Higher Costs

- Eighty percent of electronics manufacturers report they have increased pricing due to higher costs. Roughly 20% report they have not increased prices because they can't raise price. Roughly 12% of the electronics manufacturing supply chain reports they have raised prices because of higher demand which enable them to charge a higher price.
- For firms primarily operating in APAC, only 46% of firms indicate they have raised prices because of higher prices and 54% report they have not raised prices because they are not able to raise prices.
- Firms continue to face high material and labor costs. Even with higher prices, firms report profit margins are contracting and will continue to contract in the coming months.

Executive Summary



> Demand Remains Strong

 Electronics manufacturers continue to report strong demand. Over half of respondents indicate orders will expand over the next 6 months. The Orders Outlook Index increased to 120.

Current Conditions for the Electronics Supply Chain Remain Challenging

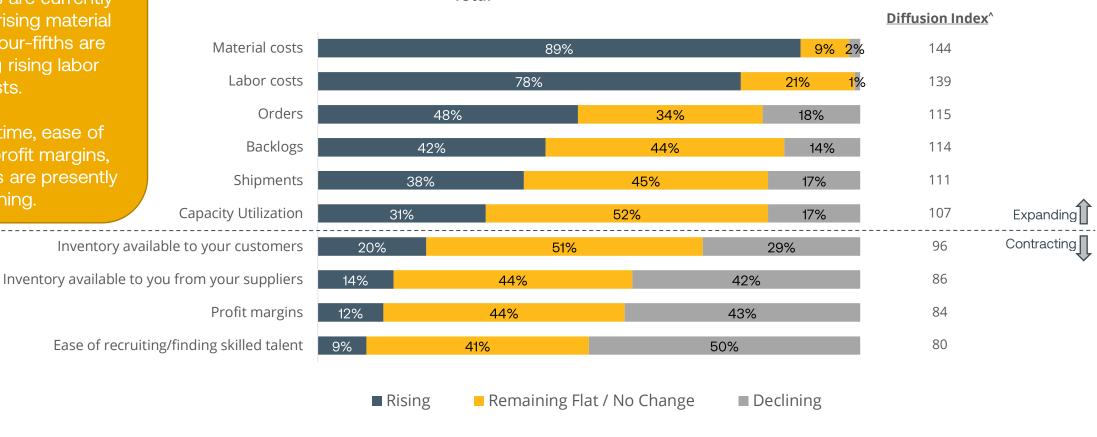


Nine in ten electronics manufacturers are currently experiencing rising material costs, while four-fifths are experiencing rising labor costs.

At the same time, ease of recruitment, profit margins, and inventories are presently declining.

Current Direction of Key Business Indicators

-- Total --



[^]A diffusion index is a statistical measure used to detect economic turning points.

Regional Differences in Current Conditions



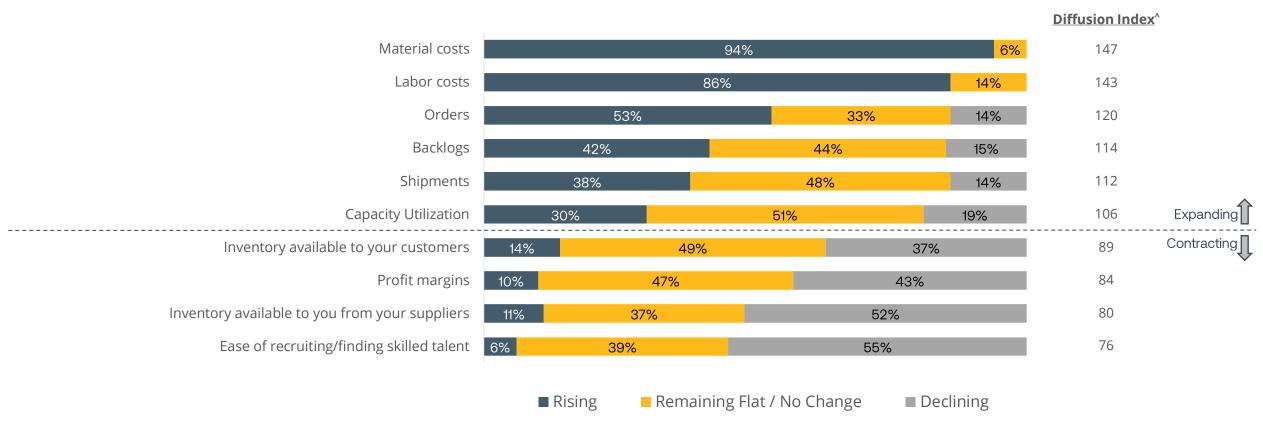
- Ease of recruitment is currently improving at a significantly higher rate among firms operating Globally when compared to both North America and APAC.
 - 23% of Global manufacturers report ease of finding skilled talent to be rising, which compares to only
 6% in North America and 0% in APAC.
- Material costs are declining more so among manufacturers operating Globally vs. North American firms.
 - While 8% of Global manufacturers report material costs to be declining, there were no (0%) firms in North America indicating a current decline.
- Inventory available from suppliers is declining at a significantly higher rate in North America than in Europe.
 - 52% of North American manufacturers indicate inventory available from suppliers is currently declining, while a much lower 22% say the same is true in Europe.

The View From Companies Primarily Operating in North America



Current Direction of Key Business Indicators

-- Primary Region: North America --



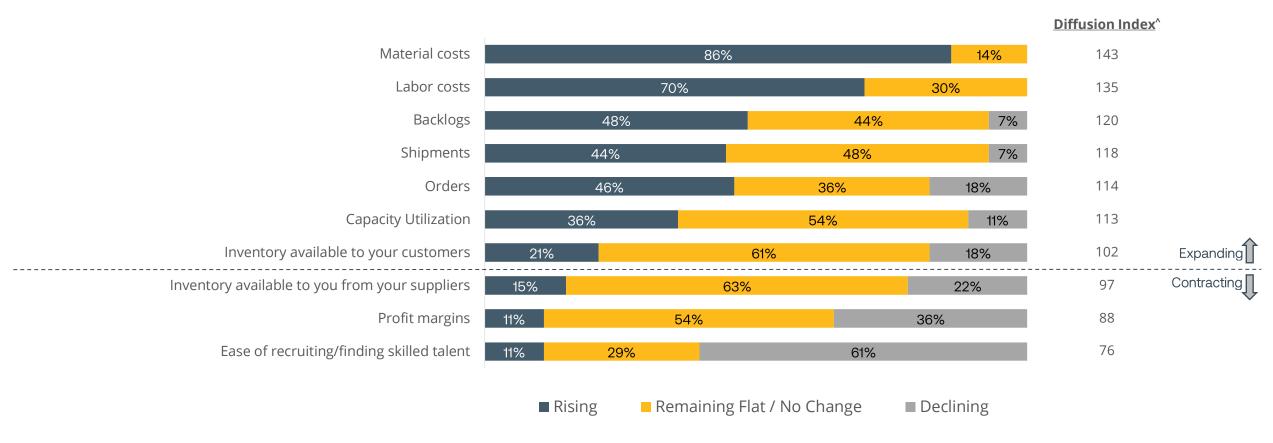
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The View From Companies Primarily Operating in Europe



Current Direction of Key Business Indicators

-- Primary Region: Europe --



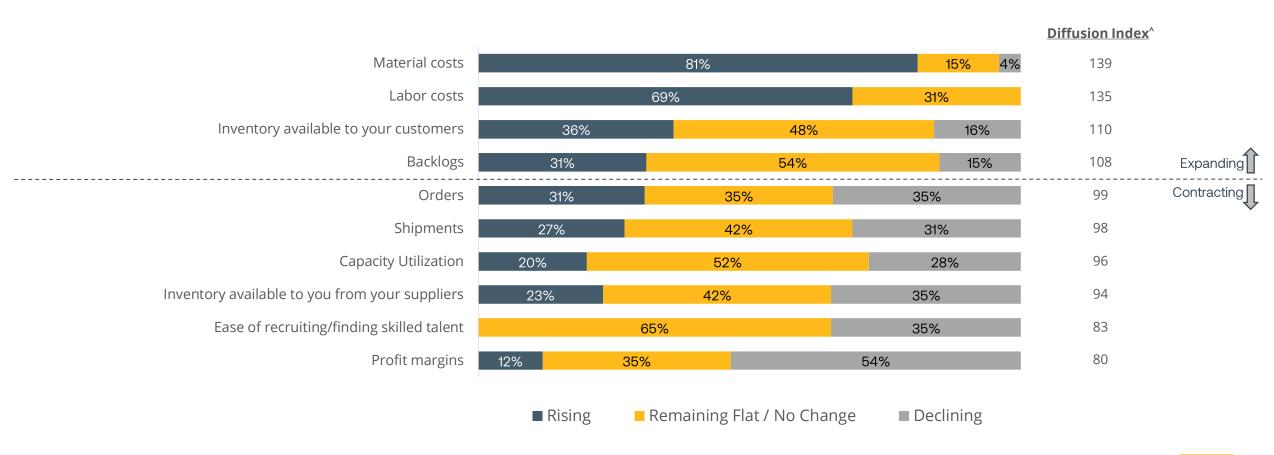
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The View From Companies Primarily Operating in APAC



Current Direction of Key Business Indicators

-- Primary Region: APAC --

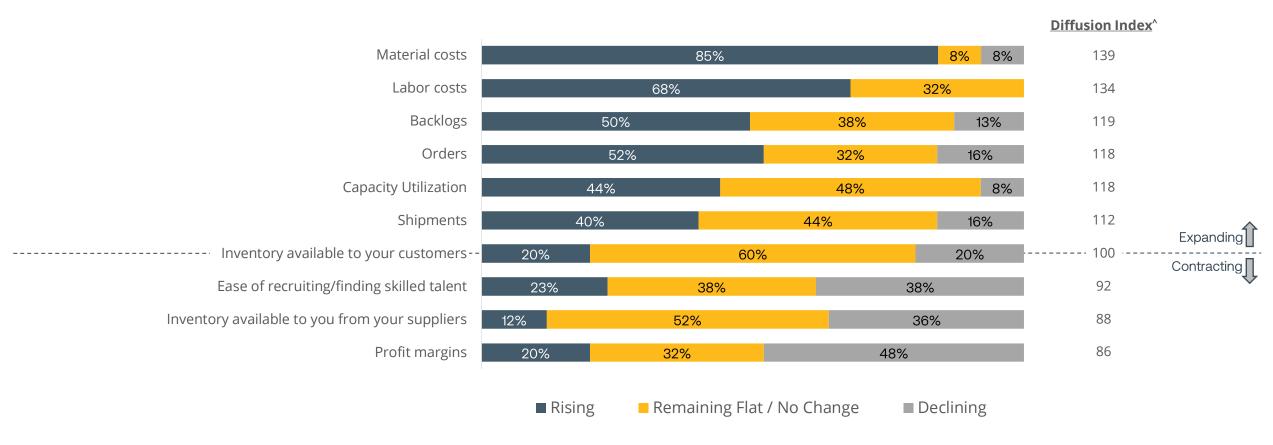


The View From Companies Primarily Operating Globally



Current Direction of Key Business Indicators

-- Primary Region: Global --



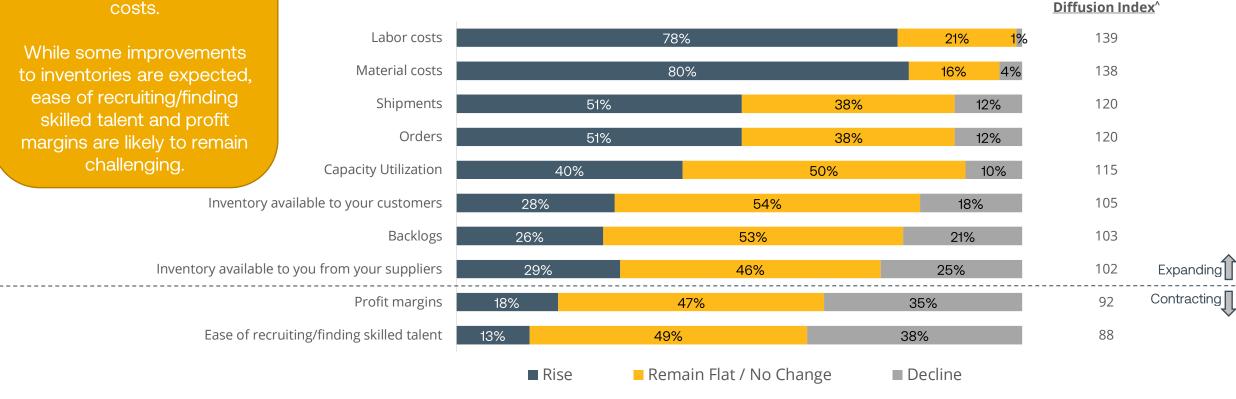
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The Outlook for the Next 6 Months: Continued Challenging Conditions



Over the next six months, manufacturers expect to see continued increases in both material and labor costs.

Anticipated Direction of Key Business Indicators – Next Six Months -- Total --



[^]A diffusion index is a statistical measure used to detect economic turning points.

Regional Differences in the Outlook



- Among firms in APAC, profit margins are expected to decline at a higher rate vs. North America and Europe.
 - 65% of manufacturers in APAC anticipate profit margins to decline in the next six months, compared to 30% of manufacturers in North America and 21% of those in Europe.
- Ease of recruitment is expected to improve more so in the next six months among firms operating
 Globally when compared to manufacturers in North America and APAC.
 - 35% of Global manufacturers expect ease of recruitment to improve, which compares to only 11% of manufacturers in North America and 4% of those in APAC.
- Expectations surrounding material costs are less positive among firms in North America vs. all other regions.
 - 92% of manufacturers in North America expect material costs to rise in the next six months, which compares to a significantly lower 75% of firms in Europe, 69% of those in APAC, and 58% among Global firms (which are more likely anticipating a decline in material costs in the next six months).

Regional Differences in the Outlook



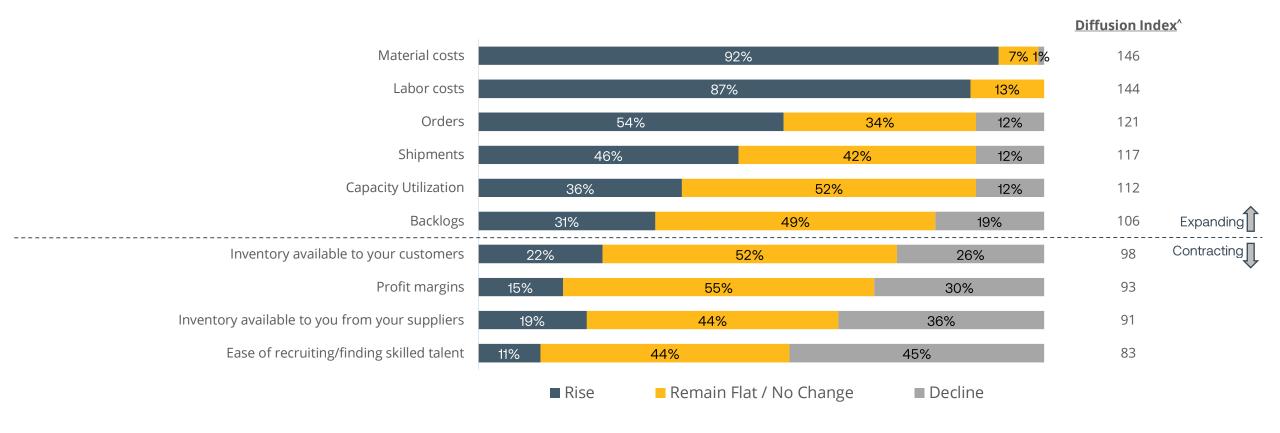
- Labor costs are expected to rise more so among firms operating in North America when compared to Global manufacturers.
 - 87% of North American manufacturers expect labor costs to rise vs. a significantly lower 62% among Global manufacturers.
- Outlook concerning inventories available from suppliers is more positive among manufacturers operating Globally compared to North American manufacturers.
 - 58% of Global manufacturers believe inventory available from suppliers will rise in the next six months vs. only 19% in North America, where firms are more likely expecting a decline.

The View From Companies Primarily Operating in North America



Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: North America --



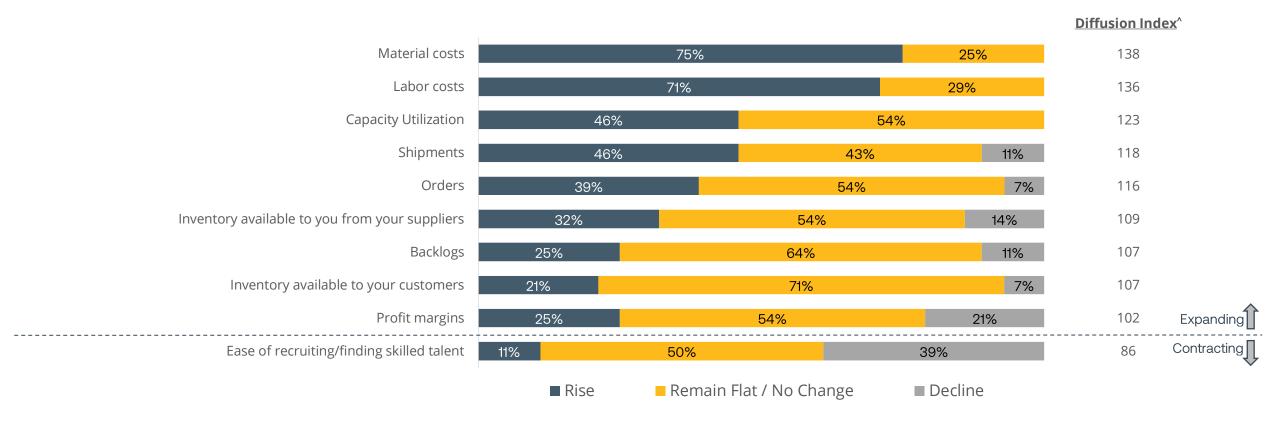
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The View From Companies Primarily Operating in Europe



Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: Europe --

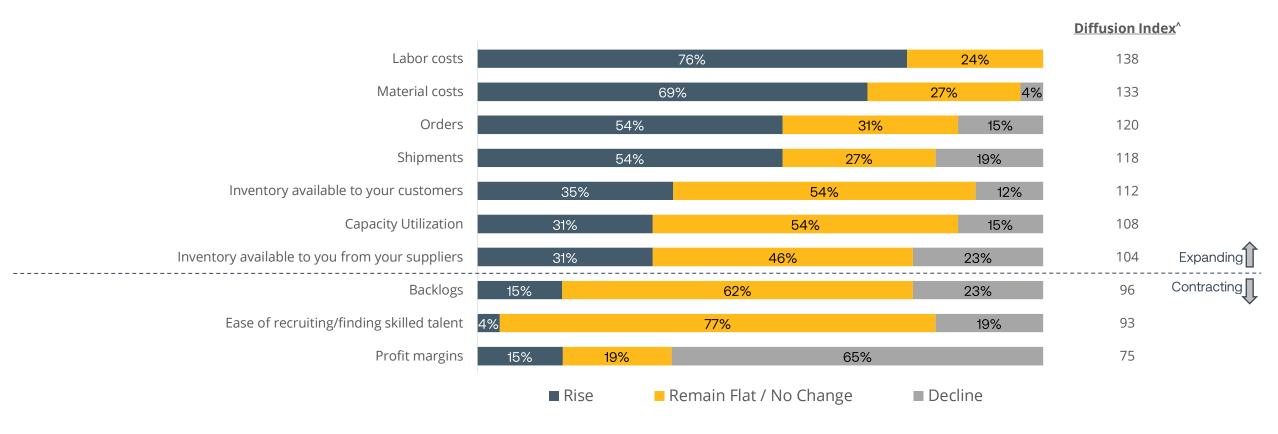


The View From Companies Primarily Operating in APAC



Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: APAC --

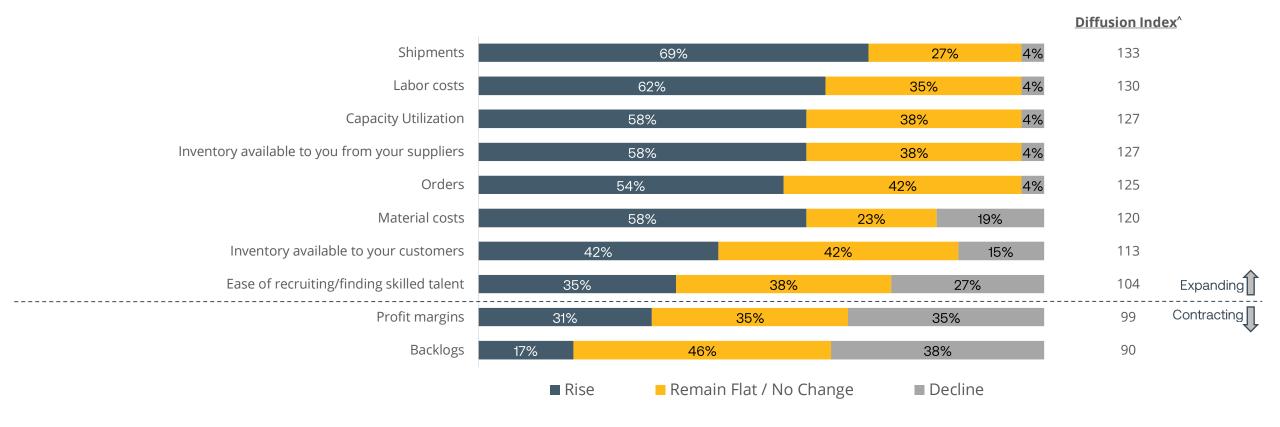


The View From Companies Primarily Operating Globally



Anticipated Direction of Key Business Indicators – Next Six Months

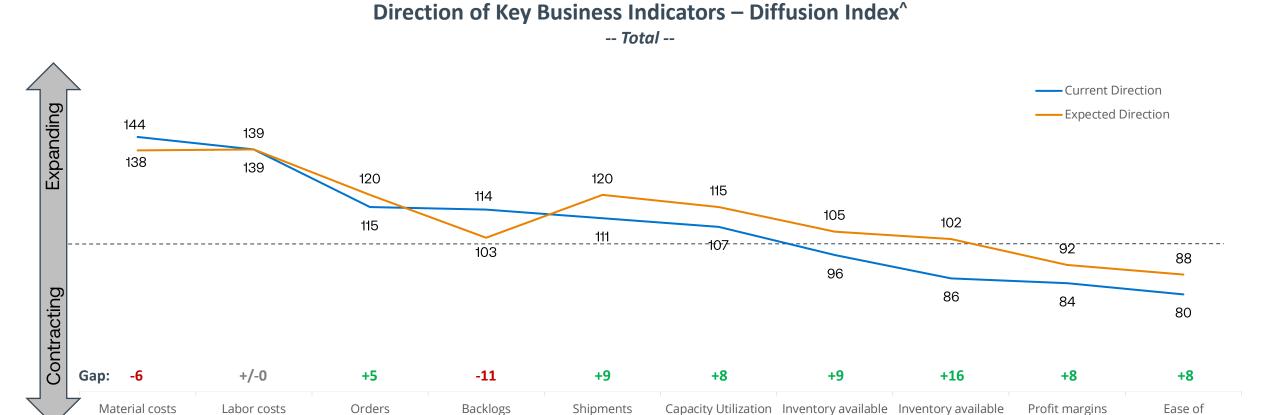
-- Primary Region: Global --



Labor Costs are Expected to Remain Stable in the Next Six **Months**



Although manufacturers anticipate material costs and backlogs to decline, they do expect to see improvement regarding inventories, shipments, profit margins, capacity utilization, ease of recruitment, and orders.



Shipments

to your customers

to you from your

suppliers

Labor costs

Orders

Ease of

recruiting/finding

skilled talent

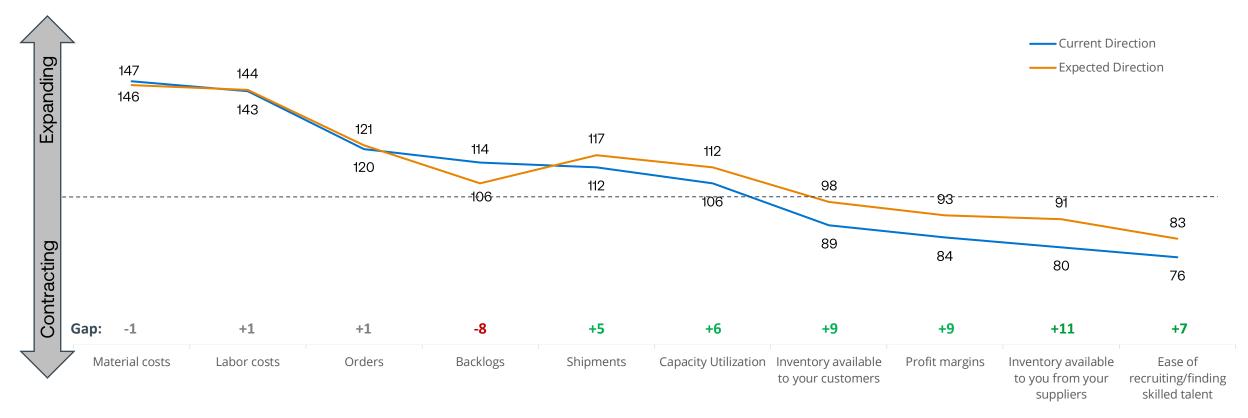
A diffusion index is a statistical measure used to detect economic turning points

The View From Companies Primarily Operating in North America



Direction of Key Business Indicators – Diffusion Index[^]

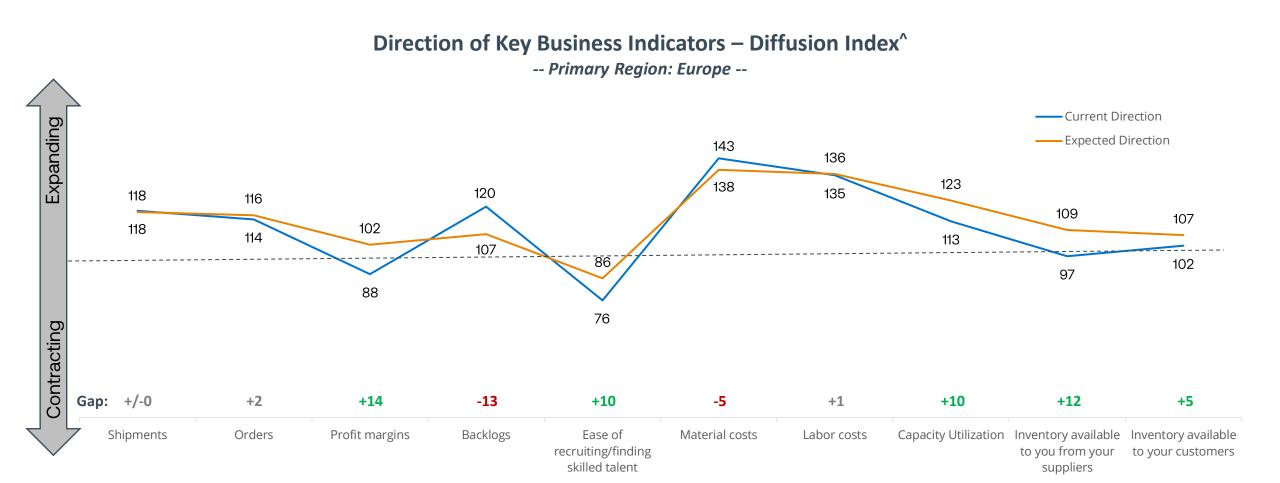
-- Primary Region: North America --



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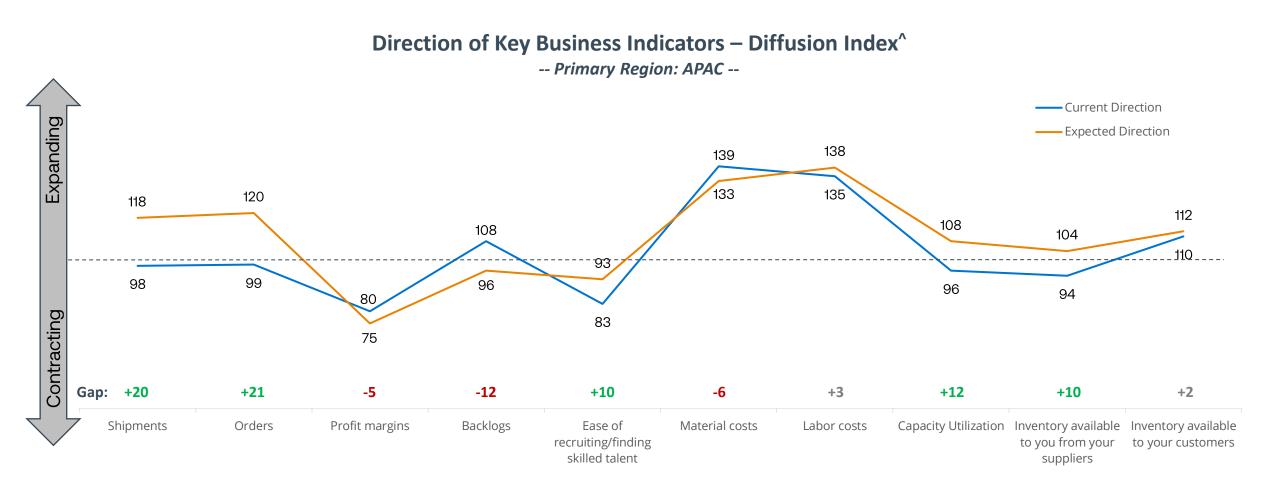
The View From Companies Primarily Operating in Europe





The View From Companies Primarily Operating in APAC

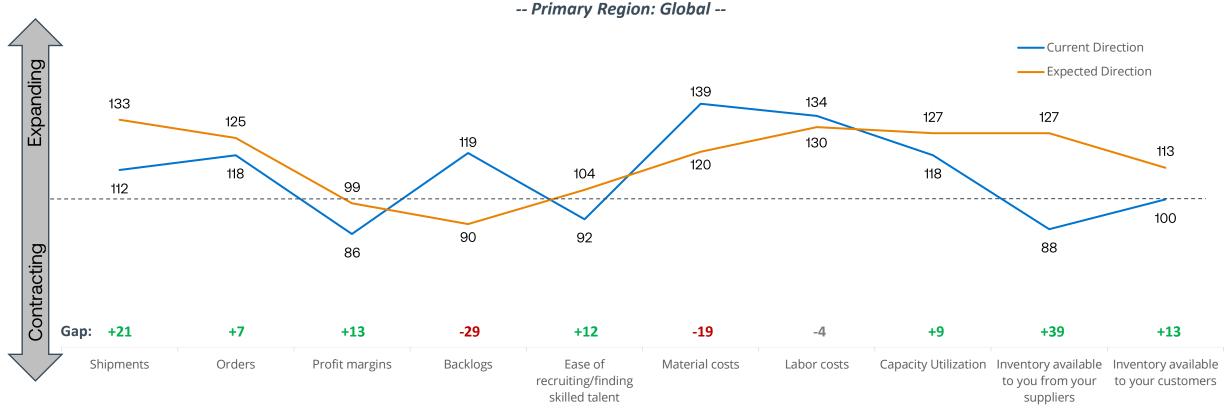




The View From Companies Primarily Operating Globally







July 2022 Special Questions

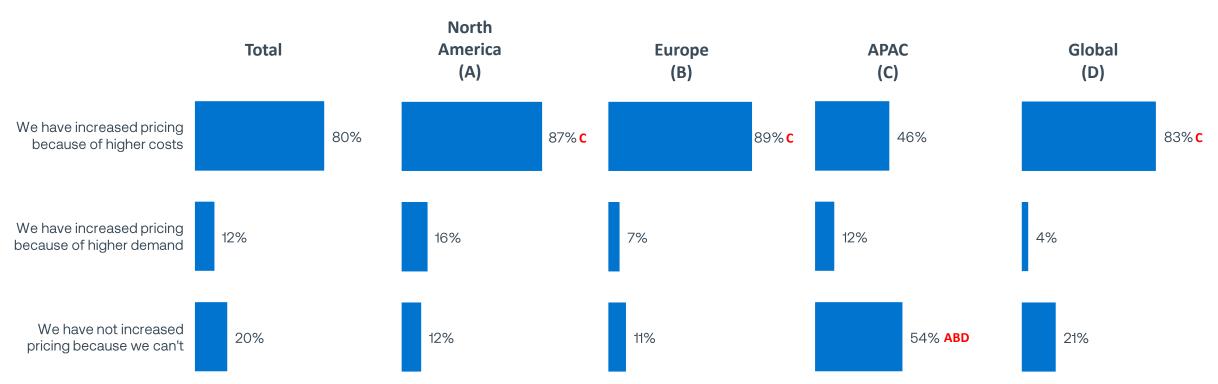
Four-Fifths of Manufacturers Have Increased Pricing Due to Higher Costs, While One-Fifth Indicate They Have Not Increased Prices Because They Can't



While North American, European, and Global manufacturers are more likely to indicate they have increased pricing because of higher costs, firms that operate primarily in APAC are more likely to indicate they have not increased pricing because they can't

Incidence of Price Increase

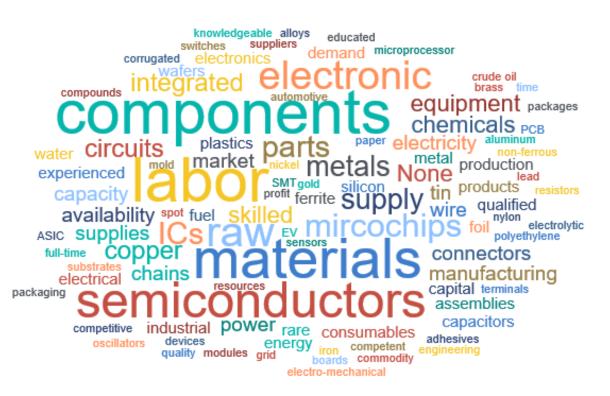
(Multiple Responses Allowed)



Electronics Manufacturers Express Concerns Around Future Availability of Labor, Components, Materials (Especially Metals), and Semiconductors



Shortages Concerned About Over Next Five Years



"We are facing several component material shortages. I expect the labor shortage to continue for some time, as well."

"Materials mainly, and supplies. Also, labor shortages are a real problem in our area as we are in a very rural spot of NY. It is definitely a concern."

"Skilled direct labor, mostly."

"Skilled talent (engineers and operators)."

"Labor - qualified and willing workers. Chemicals - supply chain and global conflicts. Capital equipment - supply chain and global conflicts."

"Parts we need to manufacture our products and quality workers."

"Electronic components raw materials like metals."

"Precious Metals: Gold, Ferrite, Iron, Brass, Copper."

"Rare earth materials, other essential raw materials."

"Integrated circuits and any component/modules/assemblies that include ICs in the Bill Of Material."

"Labor, energy, semiconductor, raw material, specific equipment."

"Semiconductors, sensors, switches."

"Semiconductors and raw material for mechanics."

Appendix

Current Conditions Diffusion Indices

Month-to-Month Comparisons



	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	July 2022
Material costs	144	144	145	145	143	142	146	145	146	144
Labor costs	133	136	135	137	138	138	134	138	137	139
Orders	127	124	123	123	120	124	121	119	118	115
Backlogs	125	122	124	124	122	119	114	120	119	114
Sales*	124	123	122							
Shipments [^]				117	112	115	115	114	114	111
Capacity utilization	114	115	110	114	111	113	114	110	104	107
Profit margins	96	91	90	87	82	86	85	89	85	84
Inventory available to your customers	89	92	87	91	88	109	94	94	91	96
Ease of recruiting/finding skilled talent	77	80	77	78	80	78	79	81	79	80
Inventory available to you from your suppliers	73	78	73	77	78	78	83	79	82	86

 Δ +5 points or more vs. previous month Δ -5 points or more vs. previous month

*Removed January 2022 ^Added January 2022

Outlook Diffusion Indices

Month-to-Month Comparisons



	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	July 2022
Material costs	136	139	138	139	142	139	140	138	140	138
Labor costs	131	135	133	133	137	136	135	134	135	139
Orders	126	128	126	125	121	123	121	122	119	120
Backlogs	112	116	116	120	113	110	109	114	112	103
Sales*	128	129	127							
Shipments [^]				120	119	121	117	119	115	120
Capacity utilization	119	118	116	118	118	116	116	116	112	115
Profit margins	103	100	96	92	94	97	94	97	90	92
Inventory available to your customers	100	100	99	97	99	103	101	100	102	105
Ease of recruiting/finding skilled talent	91	88	86	82	87	86	88	86	90	88
Inventory available to you from your suppliers	95	92	88	90	93	94	93	92	92	102

△+5 points or more vs. previous month

△-5 points or more vs. previous month

*Removed January 2022 ^Added January 2022

Methodology



- > Each month, IPC surveys executives in the electronics manufacturing sector across the globe with the goal of assessing the current state of the industry.
- > The results contained herein are based upon the findings of IPC's The Current State of Electronics Manufacturing Survey, which was fielded between the dates of June 9 to June 28, 2022.





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29 →