

Frequently Asked Questions (FAQs)
COVID-19's Effects on Monthly Reports on the
Manufacturers' Shipments, Inventories, and Orders (M3) Survey

Data Collection

How has the collection of the Manufacturers' Shipments, Inventories, and Orders (M3) data been affected?

For the Manufacturers' Shipments, Inventories, and Orders (M3) Survey, processing and data quality were monitored throughout the month and quality metrics fell within normal ranges for this survey.

Did the Census Bureau change its data collection procedures this month?

Yes. The Census Bureau utilizes a wide variety of collection methods for its surveys. Data, particularly from businesses, are collected on paper, online, fax, and through telephone interviews. Our National Processing Center (NPC) is responsible for mailing, and handling outbound calls. Services offered by NPC had been limited to ensure employee safety but are now mostly back online. Companies that have not responded may be contacted by staff in NPC or by an analyst from our headquarters.

How has companies switching to create new products changed data classification in the Manufacturers' Shipments, Inventories, and Orders (M3) survey?

Manufacturers who pivot to making goods other than their primary goods for a period of time are not reclassified into a different NAICS code based on the new products at this time. For example, if a manufacturer primarily makes motor vehicle parts (NAICS 3363) and switched to making medical equipment and supplies (NAICS 3391), the data are still being collected under motor vehicle parts (NAICS 3363).

Methodology

Were there any estimates withheld or delayed because of data collection problems?

No. All estimates were released as scheduled.

Did the Census Bureau modify its usual estimation methods used to produce monthly manufacturing estimates?

No. Standard estimation methods were used to produce all indicator estimates.

Has the reliability of the monthly manufacturing estimates changed?

No. The coverage of the M3 survey panel in the current month was comparable to the coverage in prior months.

Seasonal Adjustment

Did the Census Bureau alter the procedures for developing seasonally adjusted estimates for monthly manufacturing data?

Yes. Consistent with our approach since March, an alteration was made in an option in the Census Bureau's X-13ARIMA-SEATS seasonal adjustment software (the "additive outlier adjustment" option) for the current data month for some kinds of business. This was done in an effort to ensure that the published seasonally adjusted values fully include any immediate effects. These effects are not typical month effects and so should not be permitted to influence the seasonal factors for current month and surrounding months. The altered option was applied to each kind of business whose current month unadjusted value was found to be statistically untypical, as indicated by the appropriate t-statistic having a magnitude larger than a commonly used "critical value", and for which there were independent indications of an impact. Such indications confirm that a current month survey value has an unusual potential to be untypical and justify the use of a standard critical value. In a usual month, every survey value is "blindly" tested, therefore a higher critical value is used, making it more difficult for the survey value to be classified as untypical.

What was the impact of altering the seasonal adjustment option (additive outlier adjustment)?

The kinds of business that the alteration impacted may show a change in either direction from the prior month. For these kinds of business, if the current month values had been treated as typical, the program would have taken part of the change to be a seasonal effect and would have adjusted the data in a way that would have brought the adjusted percent change from the prior month to the current month closer to zero. Since March, the altered option we have used in the current month determined the changes in these kinds of business to be out of the ordinary. As a result, the current to prior month percent changes in the adjusted value were left further from zero.

How was the survey value for a kind of business determined to be out of the ordinary?

Each month, independent indications of how each kind of business performed are researched as part of our normal review of the estimates to detect reporting errors. This research includes, but is not restricted to, conversations with companies in our survey, a review of publicly available press releases from both companies and industry associations, and a review of other economic indicators.

Beginning in March, the monthly value of a kind of business was considered to be out of the ordinary if it was found to be statistically untypical (as indicated by the appropriate t-statistic

having a magnitude larger than a “standard” critical value) and independent sources indicated an impact.

Additional Information

Are there additional Census Bureau resources available on the COVID-19 Pandemic?

Yes. The Census Bureau has created a [COVID-19 reference page](#) which includes links to relevant Census data sources. There is also a more general [FAQ on the impact of COVID-19 on operations](#).

Source: U. S. Census Bureau
Economic Indicators Division

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