according to the patterns recorded in the input-output table. These purchases in turn generate additional purchases by the industry's suppliers, and so on. Additionally, employees and business owners make personal purchases out of the additional income that is generated by this process, sending new demands rippling through the economy.

Multipliers describe these iterations. The Type I multiplier measures the direct and indirect effects of a change in economic activity. It captures the inter-industry effects only, i.e., industries buying from local industries. The Type II (Social Accounting Matrix or SAM) multiplier not only captures the direct and indirect effects, but also reflects induced effects (i.e., changes in spending from households as income increases or decreases due to the changes in production). Using this framework, the indirect and induced effects of the data center industry on other sectors of the economy were calculated in terms of employment, labor income (including wages, salaries, benefits, and proprietors' income), value added, and tax payments.

For this study, PwC used customized input-output models for the United States as a whole and for each state to calculate the data center industry's indirect and induced economic contributions to each study area in terms of employment, labor income, value added, and tax payments.

## Capital investment contribution

To date, the Census Bureau has not yet released any industry-level capital expenditure data for 2023 and 2024. For this study, estimates of data center capital expenditures are based on industry research sources. In particular, PwC relied primarily on Dell'Oro Group's data center capex estimates, which measure capital expenditures by the largest global cloud service providers to expand and upgrade data center capacity, including investments in servers, networking equipment, storage, and supporting data center infrastructure systems.[7] Dell'Oro's estimates are derived from market intelligence, vendor shipment data, and provider disclosures, and are well suited to capturing the rapid acceleration in hyperscale and AI-driven investment observed in recent years. Consistent with the functional focus of this study, capital expenditures are limited to physical structures and equipment associated with data center deployment; investment in intellectual property products, such as software and research and development, is excluded. Global data center capital expenditure estimates were allocated to the United States based on the U.S. share of global data center capacity and investment, as informed by published analyses from McKinsey & Company and Synergy Research Group.[8] This allocation reflects observed concentration of capacity and investment activity rather than assuming a one-for-one correspondence between firm headquarters location and spending geography.

To contextualize and validate the Dell'Oro estimates, PwC also reviewed other reputable industry research, including global data center infrastructure spending estimates from IoT Analytics and data center systems spending forecasts from Gartner, as well as growth and capacity indicators published by Synergy Research Group.[9] While these sources differ in scope and methodology—ranging from operator-level capex to broader infrastructure and IT systems spending—they consistently indicate elevated levels of data center investment in 2023 and 2024. Together, these sources provide corroborating evidence on the direction and order of magnitude of recent data center capital spending.

PwC translated the data center industry's capital expenditures into purchases of capital assets by type through the use of the so-called "capital flow matrix" prepared by the BEA. The input-output model was then used to quantify the full economic effect of this spending. The capital spending effect is classified as an indirect and

7. See Dell'Oro Group, "Data Center Capex" (market research overview) at https://www.delloro.com/market-research/data-center-infrastructure/data-center-capex/.

8. See McKinsey & Company, "The future of US hyperscale data centers" (data center demand and investment trends) at https://www.mckinsey.com/industries/public-sector/our-insights/the-data-center-balance-how-us-states-can-navigate-the-opportunities-and-challenges and Synergy Research Group data on hyperscale capacity (e.g., hyperscale share of global capacity) at https://www.datacenterdynamics.com/en/news/hyperscalers-account-for-41-of-worldwide-data-center-capacity-synergy-research-group/.

9. See IoT Analytics, "Data Center Infrastructure Market" at https://iot-analytics.com/data-center-infrastructure-market/; Gartner, "Gartner Forecasts Worldwide IT Spending to Grow 7.5% in 2024," https://www.gartner.com/en/newsroom/press-releases/2024-07-16-gartner-forecasts-worldwide-it-spending-to-grow-7-point-5-percent-in-2024; and Synergy Research Group, "Hyperscale Data Center Capacity and Growth", https://www.srgresearch.com/articles.