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National Industrial Report

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Chip Shortage Impacts U.S. Industrial

- The global shortage of semiconductors, also known as computer chips, is affecting manufacturers of all shapes and sizes. Used in everything from household appliances and cars to smartphones and video game consoles, chips are in short supply, causing headaches for both goods producers and consumers. Chip manufacturers have not been able to meet the escalating demand as the global economy has rebounded from the worst of the pandemic, and these chip shortages have caused bottlenecks in the production of many goods, contributing to inflation.
- The U.S. has outsourced a great deal of chip production in recent decades, falling from 37% of global share to 12% over the last 20 years, according to the Semiconductor Industry Association. The Biden administration is considering the issue a matter of national security and has made stateside chip production a priority to help strengthen domestic supply chains. A sweeping bill aimed at boosting U.S. production of chips passed the Senate in June but has since stalled in the House.
- Large semiconductor manufacturing facilities are being built in the U.S. and more will soon begin construction. If Phoenix—with Intel manufacturing semiconductors at their nearly four million square foot Chandler Octillo campus and a smattering of smaller chip manufacturers in the area—wasn't already the semiconductor capital of the U.S., it will be soon. Taiwan Semiconductor Manufacturing Co. (TSMC), which produces roughly half of the global supply of chips, recently began construction on a 3.8 million-square-foot facility in Phoenix's North-Gateway submarket, investing \$12 billion in the chip giant's first U.S. plant. Intel, for its part, is investing \$20 billion in a 670,000-square-foot expansion of its campus. Samsung is currently deciding where to locate a \$17 billion factory in the U.S., as vice chairman Jay Y. Lee visits North America this month. While reporting suggests the frontrunner is a site in Williamson County, Texas, Samsung suffered hundreds of millions of dollars in damages due to shut-downs at its Austin facility when last winter's storm wreaked havoc on the Texas power grid. Arizona and New York are also reported to be under consideration.
- While these plants will take years to get up and running—TSMC won't start producing chips at its massive Arizona facility until 2024—they could have lasting impacts on chip production and the U.S. industrial market. The pandemic has exposed many weak links in the global supply chain, which could potentially lead to a reshoring of some manufacturing in coming years, making increased stateside chip production more vital.

