

Oct. 8, 2021

## U.S. increasingly reliant on foreign semiconductor manufacturing as pandemic demands spike

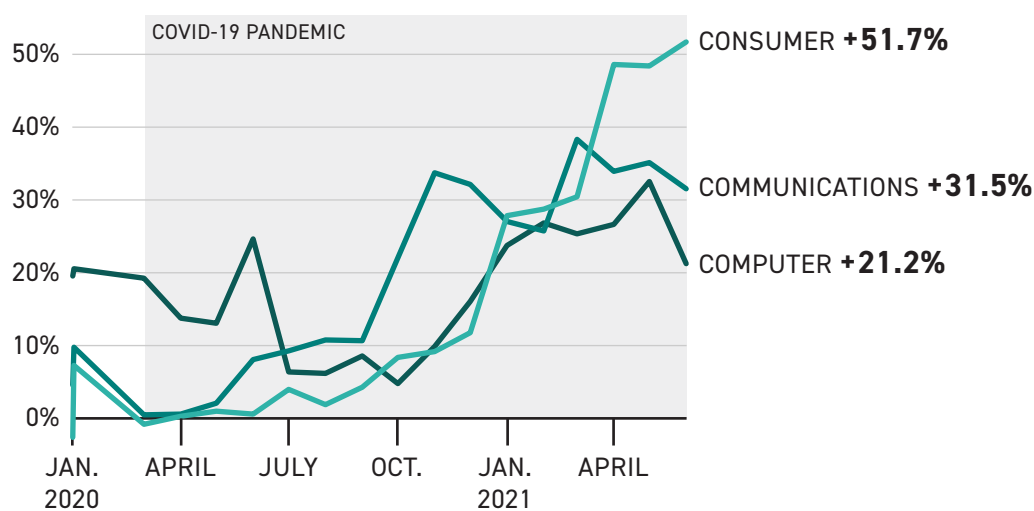
Following initial uncertainty in chip demand brought on by the pandemic, the semiconductor industry is still playing catch-up. In early 2020, several industries cut back on chip purchases as Covid-19 spread, and as a result, chip manufacturers adjusted their output. But since then, there's been a heightened demand for semiconductors — found in everything from cars to refrigerators to laptops — particularly in sectors that serve the work-from-home or remote health care crowds. The global shortage has had serious ramifications for industries that provide semiconductor-reliant products.

### Demand for computers and communication devices booms with lockdown, work from home

As remote work and school became common during the pandemic, demand shot up for semiconductor-enabled products, such as computers and other communication devices. In 2020, those two categories made up the majority of the global semiconductor demand.

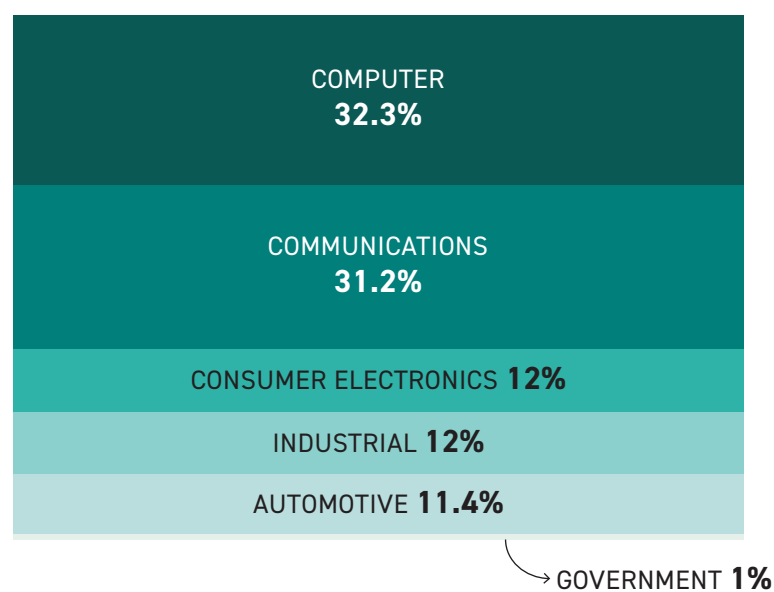
#### Major consumer sectors increased chip purchases during the pandemic

YEAR-OVER-YEAR MONTHLY CHIP SALES GROWTH



#### Six categories drove semiconductor demand in 2020

SHARE OF TOTAL 2020 DEMAND BY CATEGORY\*



## U.S. dominates global market share, but manufacturing capacity has fallen in past decades

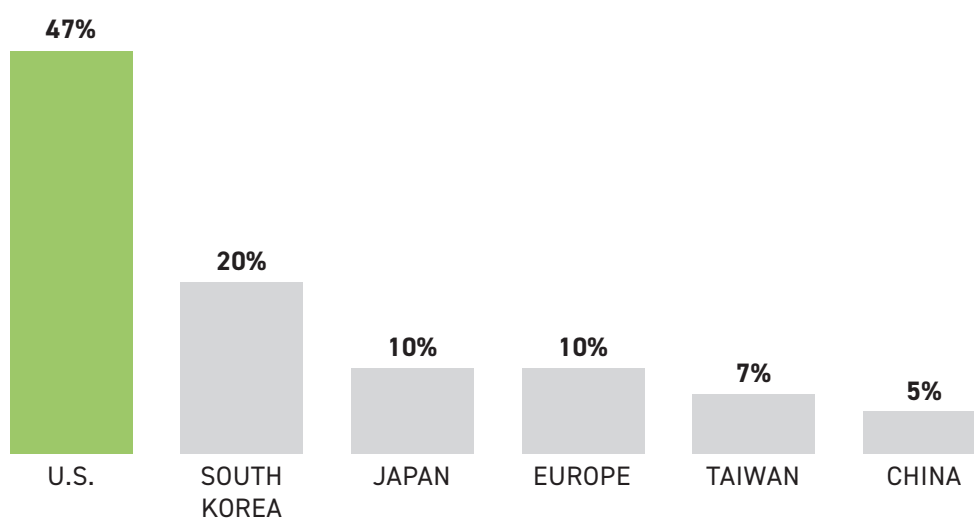
For decades, U.S. semiconductor firms have held onto the lead position in global sales market share. Currently, the U.S. holds 47 percent — more than any other country. The U.S. specifically leads in research and development intensive activities, such as chip design.

But it's a different story for manufacturing. In 1990, the U.S. share of semiconductor manufacturing was 37 percent, second only to Europe. Since then, it has been outpaced by a handful of Asian countries that have been investing heavily in chip manufacturing, most notably Taiwan and South Korea. Both manufacturing and raw materials are now highly centralized in a handful of Asian countries.

In a push to bring semiconductor manufacturing back to the U.S. and make New York a global tech hub, Senate Majority Leader Chuck Schumer and Sen. Todd Young (R-Ind.) introduced the U.S. Innovation and Competition Act to the Senate. The bill, which passed the chamber this summer 68-32, would authorize \$250 billion for scientific innovation to compete with China — \$52 billion specifically for the semiconductor industry.

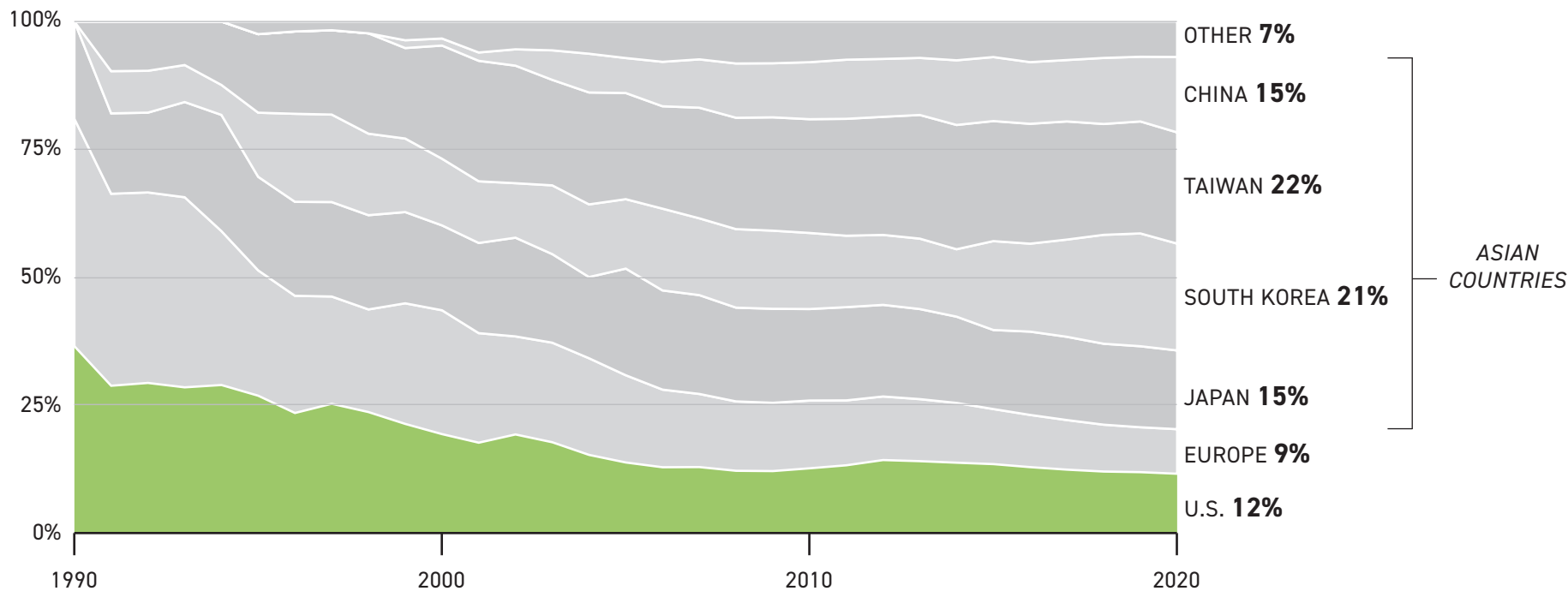
### Nearly half of the global market share is controlled by the U.S.

ANNUAL GLOBAL MARKET SHARE, AS OF 2020\*



### U.S. slice of global semiconductor manufacturing capacity fell 25 percentage points since 1990

SHARE OF MANUFACTURING CAPACITY\*



\* Percentages may not add to 100 due to rounding.

Sources: Semiconductor Industry Association, The Next Web, Chuck Schumer for Senate, POLITICO reporting