The Briefing

- Taiwan Semiconductor Manufacturing Co. accounts for 54% of the global market share
- Taiwan, South Korea, and China combine for 87% of the global semiconductor market

The Top 10 Semiconductor Companies by Market Share

Semiconductors are an essential component of the microchips that power virtually every modern electronic device. As the objects around us get "smarter" and demand for electronics grows around the world, the demand for semiconductors will continue to skyrocket.

So, which companies currently make these chips, and where are they located?

The above infographic uses data from <u>TrendForce</u> to break down the top 10 semiconductor companies by country and market share.

The Biggest Semiconductor Companies

Before diving into the companies, it's important to have context on their business. Also known as foundries, these semiconductor companies specialize in the fabrication or production of chips. "Fabless" chip makers—companies that design their chips and supply hardware but do not have fabrication plants—outsource chip production to foundries, primarily in Asia.

Taiwan, China, and South Korea combine for roughly **87%** of the global foundry market. Here's how it breaks down:

Company	Market share	Country
TSMC	54%	
		Taiwan
Samsung	17%	
		South Korea
UMC	7%	
		Taiwan
GlobalFoundries	7%	
		U.S.
SMIC	5%	
		China
HH Grace	1%	
		China
PSMC	1%	
		Taiwan

Company	Market share	Country
VIS	1%	Taiwan
DB HiTek	1%	China
Tower Semiconductor	1%	Israel
Other firms	5%	N/A

TSMC, short for Taiwan Semiconductor Manufacturing Company, is by far the world's largest chip manufacturer. It's also the sixth most valuable company in the world with a market cap of over \$600 billion, and supplies chips to the likes of Apple, Intel, and Nvidia.

TSMC and Samsung are the only companies capable of producing today's most advanced 5-nanometer chips that go into iPhones. However, the Taiwanese company is one step ahead and set to produce its 3-nanometer chips in 2022, offering the most advanced foundry technology.

Other companies on the list include China's largest chipmaker SMIC, one of the 60 Chinese companies blacklisted by the U.S. in 2020. On a country level, Taiwan accounts for **63%** of the foundry market, followed by South Korea with 18%. In both countries, the majority of the market share belongs to a single company.

The 2021 Semiconductor Shortage

With the adoption of 5G devices and other new technologies, chips have been in high demand.

While pandemic-induced shutdowns have hampered supply, the demand for chips has continued surging with reopening economies. The resulting chip shortage has rattled several industries with lead times—the gap between when a semiconductor is ordered and when it is delivered is at a record high of **22 weeks**.

The <u>chip shortage</u> is a boon to semiconductor companies, but downstream firms are struggling. Global automakers are set to make **7.7 million** fewer cars in 2021, which translates into a **\$210 billion** hit to their revenues. Consumer electronics have taken a blow as well, with popular products like the Playstation 5 console in short supply. New chip factories take years to build, in addition to billions of dollars. With many analysts expecting the shortage to last through 2023, it'll be interesting to see how chipmakers respond, especially if demand continues to rise.

Where does this data come from?

Source: <u>TrendForce</u>