Microchip shortage is expected to have far-reaching effects

The rise in the number of people attending school virtually and working from home due to the COVID pandemic increased the demand for computers. At the same time, many factories were shut down for an extended period, unable to supply computer parts, most notably microchips. Another issue is that the manufacture of microchips is concentrated among just a few suppliers. A fire at a chip plant in Japan and extreme winter storms in Texas exacerbated the problem.

Semiconductors are the basis of global technology competition. The computer chips in the highest demand are not particularly sophisticated or expensive, but they are indispensable. These components are used in everything from kitchen appliances to washing machines and electronic gadgets.

Taiwan and South Korea make 70% of the world's microchips. China is showing indications of obtaining more chips from Taiwan—by force if necessary. If China controls Taiwan's semiconductor industry, they will control the global market. This control would be more valuable than controlling worldwide oil supplies.

China continues to lag in domestic manufacturing of these chips but consumes more than half the world's microchips, a demand that is expected to increase. China, therefore, relies on imports to support its growing economy. They are continuing to acquire manufacturing equipment, though unsuccessfully. The last option would be a leveraged buyout of TSMC (Taiwan Semiconductor Manufacturing Company).

It is expected that it will take at least a year to get back on track to meet the demand for microchips. Any further interruption in the global chip supply will have drastic consequences, not only economically, but geopolitically as well. Currently, the economic effects are trickling down to all industries, professions, and aspects of daily existence. There are new chip factories being built, but these will take at least two years to complete. Until demand subsides, chip supplies will not increase.

Sources

https://www.foxbusiness.com/technology/global-microchip-shortage-has-china-eyeing-taiwan

https://www.newscientist.com/article/2271918-theres-a-global-shortage-of-computer-chips-whats-causing-it/

https://www.zdnet.com/article/the-global-chip-shortage-is-a-bigger-problem-than-everyone-realised-and-it-will-go-on-for-longer-to