

## INTEL'S CHIP MANUFACTURING FACILITY IN OHIO, USA

### WHAT HAPPENED?

On 21 Jan 2022, Intel announced a massive investment of USD 20 billion to establish two new semiconductor chip manufacturing factories in Ohio, USA. This investment makes Ohio the first manufacturing site location in four decades for Intel. The project is expected to create 3,000 Intel jobs and 7,000 construction jobs over a span of three years from late-2022 to 2025. The mega-site will span across 1,000 acres in Licking County, a suburb in Columbus. Intel has pledged an additional investment of USD 100 million to build talent and research programmes across the state. The new factories will be powered by 100 percent renewable electricity and adhere to environmentally friendly practices during the setting up of the units.

### WHY IS OHIO CHOSEN AS THE FACTORY-SITE?

#### Favourable tax laws

- Ohio offers tax credits under the clause "**Ohio Job Creation Tax Credit**".
- Under this clause, a business will receive a tax credit or refund against its corporate franchise tax based on the new full-time employees. The amount of tax credit can be up to **75% for up to 10 years**.
- In order to be eligible, the business must create at least 25 new, full-time jobs within three years of operations, with average wage of all new employees at least 150 percent of the current federal minimum wage.
- The business must show that the tax credit is a major factor in its decision to go forward with the project.

#### Favourable housing market

- Ohio has a favourable housing market compared to the average US state, and very affordable compared to the Silicon Valley.
- The average home sales price in USA is USD 374,900 in 2021, whereas the average home sales price in Columbus (the area of the factory-site) is USD 292,860 in 2021. Therefore, making Ohio an affordable state for new home owners, which the factory will bring to the state.

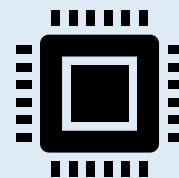


## WHY ARE COMPANIES EXPANDING CHIP MANUFACTURING IN THE US?

The announcement of Intel to establish a manufacturing unit in USA does not come as a surprise as other companies have already made plans to set up manufacturing units of semiconductor chips in the US. Samsung announced similar plans in Sep 2021, of setting up a manufacturing factory of semiconductor chips near Austin, in Texas. The project will be worth USD 17 billion. Other chip manufacturers including Micron Technology has also announced plans of investing billions of dollars in manufacturing units in USA. The recent announcements with regards to the expansion of semiconductor chips are down to three reasons, they are as follows:

### 1. Addressing the global semiconductor chip shortage

The global demand for semiconductor chips in manufacturing and consumer goods has increased leading to a supply shortage as the Asian countries have not been able to meet the demand. According to analysts, around 169 key industries across the country are adversely affected by the scarcity. The issue has become a significant factor behind the record inflation in USA, as consumer goods like phones, cars, laptops, etc are not being produced. In 2021, Apple had decided to delay the rollout of its latest iPhone model due to the chip shortage. Major car companies like General Motors and Ford had to reduce production of their cars in the North American assembly plants due to the shortage.



### 2. Reducing the dependence on Asian manufacturers

USA's share of the semiconductor chips manufacturing was 37 percent in 1990s, but over the years it reduced to 12 percent in 2020. The reason being the manufacturing of the chips were taken up by the Asian countries like Taiwan, Japan, South Korea, and China, due to cost-effectiveness. However, the COVID-19 pandemic led to a complete halt in the shipping industry as well as the manufacturing industry, thus when the world emerged from lockdowns and recovered economically, production of the semiconductor chips could not match the demand in the US or the rest of the world. In order to prevent such a scenario in the future, US companies have decided to diversify the supply of these chips by setting up manufacturing factories in USA.



### 3. Reduce dependence on China

Unlike any other product, the semiconductor chip is an integral part of consumer goods and manufacturing, but an equally important part for the defence industry, as sophisticated defence equipment manufacturing also requires semiconductor chips. These semiconductor chips are made up of **rare earth minerals**. The rare earth minerals are 17 metals which are found in abundance in very few countries, notably China, which controls 55 percent of the mining and 85 percent of the refining process. The minerals are supplied to the rest of the Asian countries who produce the chips. Hence, this overdependence on China for the minerals is a threat to national security, therefore, the US government wants to develop its own indigenous chip manufacturing industry, which sources its own rare earth minerals.



## ASSESSMENT

- The technological companies are pouring billions in setting up manufacturing factories for semiconductor chips which will invariably lead to the announcements of federal tax credits. Since these companies cannot rely solely on state tax credits to rampantly increase the production of chips as well as compete with the low production costs in Asia.
- The recent developments give the US government scope to increase pressure on China for its aggressive actions against Taiwan.



## ABOUT THE AUTHOR

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