'Next two years are crucial for India's semiconductor plans'

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Access to critical components in the semiconductor industry, such as silicon wafers, is a challenge for India's nascent semiconductor manufacturing industry.

Ashok Chandak, President of SEMI India and the India Electronics and Semiconductor Association (IESA), says that the association is working on a supply chain management plan to address this issue while working with associated industries.

Chandak says incentives from the government would help in bridging the gap in getting raw materials, while global companies could also be encouraged to set up operations in India.

Edited excerpts:

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> **ASHOK CHANDAK**
> President, SEMI India and IESA

India lacks adequate access to essential raw materials, and imports silicon wafers and high-purity gases. Will this raise costs and make India's semicon unviable?

No, it is understood that these are the factors that increase overall cost economics and create disability for Indian industries.

We have to depend on process technology, the manufacturing excellence, or some of the raw materials which are not available.

That is why the Indian government is putting incentives on the table, 50 per cent of the capex by government, and some additional support of up to 10-20 per cent by State governments.

We are telling the industry to get started even if the raw material cost is a bit expensive.

So, we have a disadvantage, but with the government funding that disadvantage is addressed initially for x no of years. The industry needs to think how they will sustain beyond these years.

IESA is working on a plan called the supply chain management, and we have mapped several materials, chemicals required, and started the dialogue with various other associated industries to start developing those things.

Tata Group is setting up a fab unit in Gujarat, but is unable to find skilled labour. How do we address this issue?

India does not have a manufacturing setup, so we don't have the trained manpower available.

So, multiple things can be done: companies like Tata, which have their own collaborator can send part of their labour force to the collaborator for training, or the collaborator can send trainers to India to train the workforce. Additional training outputs will also come up.

Semi India has already started doing work, which is called the workforce development, where the online professional development courses are getting deployed. We did two sessions already at IIT-Guwahati and IIT-Gandhinagar.

Companies wanting to set up manufacturing operations in India will have to take steps on both these fronts.

But in terms of creating sufficient workforce, do you have any timeline in mind?

My view is next two years are going to be crucial. Several institutes have to modify their course curriculum to include manufacturing-related programmes, and some of the institutes need to tie up with global companies for training.

Of those, some of the people would be interested in manufacturing jobs. That work has already started, and it will move forward in the next two to three years.

We would see that additional workforce is created that is competent enough to take manufacturing-related jobs.

The US has already come up with a lot of policies with the CHIPS Act. Do you feel that 'Make in America' is going to counter 'Make in India'?

It is definitely going to counter Make In India just as it will affect any other country's plans because a lot of chip companies are headquartered in the US.

In fact more than 50 per cent of chip manufacturing is by US-based companies.

So, they are the dominant player. Last year, the global semiconductor market was $650 billion, and more than half is supplied by the US-headquartered companies. However, they do most of the wafer manufacturing or assembly outside of the US. The current President and administration is pushing many companies to return to the US for this and invest there.

Obviously, that would impact ambitions of any other country, including in India, as we are looking for manufacturing activity in the country.

As for the extent of the impact, the semiconductor market is going to grow beyond $1 trillion by 2030 as per forecasts. It may go even like more than $1.1 trillion.

As the market grows, there is a potential opportunity for everybody, and India has to grab a part of it. Even if the manufacturing is moving to the US, it will not be 100 per cent.

There will be something outside the US, and we will have to see how we attract the players and support growth of that portion so that India takes a pie of that total market actually.

Most players coming to India are interested in designing and testing. How do we get more players to go into manufacturing?

That's a valid point. Most of the global companies so far have committed to India mainly on the design side as they see India has got a chip design/software development/technology development talent.

That is one of the positive signs which builds India in terms of the talent pool. On the manufacturing side, the biggest issue is India's own demand, which will increase substantially to about $103 billion by 2030.

So, there is sizeable demand in India itself, which is one of the carrots for companies to invest. There are also several companies that have understood the Indian business model, skilling and competence, which will help us compared to Malaysia, Vietnam, and the Philippines.