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Electronics sector remains upbeat But some urge govt watch on rising costs and shrinking talent

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Semiconductor players remain positive about their future in Singapore, but as they transform themselves to design and make higher value-added components, some say the Republic also needs to watch its rapidly rising labour and energy costs and better groom engineering talent to keep its electronics sector competitive - PHOTO: ST

[SINGAPORE] Semiconductor players remain positive about their future in Singapore, but as they transform themselves to design and make higher value-added components, some say the Republic also needs to watch its rapidly rising labour and energy costs and better groom engineering talent to keep its electronics sector competitive.

Hit by a global downturn in semiconductors, Singapore's electronics cluster has shrunk year on year for the last 24 months. Though there are now tentative signs that recovery is near, that prolonged decline - even as North Asia's electronics exporters benefited from a surge in smartphones and tablets-related demand - raised questions from analysts about whether Singapore electronics is overly reliant on the PC (personal computer) segment with negative implications for its future in a mobile-centric world.

Companies BT spoke to echoed the views of Singapore's Economic Development Board (EDB) - that the recent electronics slump is a cyclical one

and that Singapore's electronics sector actually serves diverse end-markets - from industrial to automobiles, cloud-computing equipment to consumer electronics - to ensure resilience in a fast-changing sector.

"The industries served by semiconductors are basically the whole world's industries. We have to accept that these industries have different market cycles," says Infineon Technologies Asia-Pacific president and managing director Andrew Chong.

Most also agree with EDB's assessment that the electronics sector here has a "bright future ahead" - but with some qualifiers.

"We believe there is a place for electronics in Singapore, but not without change, and thought and innovation," says Mr Chong.

Transformation is already underway in Singapore's semiconductor sector as its firms seek to match their activities to the world's market needs, says Jagadish C V, chief executive of wafer foundry Systems on Silicon Manufacturing Co. That means, for instance, moving towards higher value-added niche areas, producing not just simple digital logic chips, but high-performance mixed signal devices, he says.

But as they change, some say managing costs and demand for skilled manpower may be daunting.

The shrinking local engineering talent pool is an issue as young graduates seem to favour finance-related jobs, says Chiou Lid Jian, general manager of ASE Singapore, part of the global Advanced Semiconductor Engineering (ASE) Group.

K C Ang, senior vice-president and general manager of GlobalFoundries Singapore, also hopes for continued government support to "promote engineering education among the youth to create the necessary pool of future engineering talent to support the semiconductor ecosystem".

"As semiconductor technologies become more advanced, systems and processes will become more complex and sophisticated to manage. We need the right talent and skill set to be able to handle these," Mr Ang said.

This challenge is magnified by the tightening of foreign manpower policies - which have added to the cost of hiring engineers from abroad, says Mr Chiou. The tighter labour market is also pushing wages up at a faster pace.

Managing energy costs is another challenge, as wafer fabrication consumes large quantities of energy and water. Mr Chiou says energy costs can be double that in Taiwan and Malaysia. "Having attractive subsidies and ensuring reliable, high quality of infrastructure to support our 24/7 operation is thus important," says Mr Ang.

Mr Chong, however, thinks subsidies can hide externalities and are unsustainable. Transparent energy costs put the right type of pressure on companies to optimise resources.

"What obviously needs to happen, is productivity. Productivity in terms of output per worker, output per square foot of land, productivity in terms of every dollar of investment," he says.

While firms should "take ownership of their costs", Mr Jagadish also hopes government agencies can look at Singapore's infrastructural costs more closely. "How can they make Singapore's electronics sector able to compete with Taiwan, Korea, China and even upcoming emerging economies such as Vietnam and Cambodia? Because these countries are also looking for opportunities to enter the semiconductors space. The value creation of the semiconductor sector is much higher than garments, clothes, leather goods," he says.

Rising business costs will affect Singapore's competitiveness relative to other locations, but is unlikely to prompt relocation of the large manufacturers here.

Mr Jagadish is clear that the 14 wafer fabrication plants, 20 assembly and test operations, and close to 40 integrated circuit designs centres here were all started by companies that intend to stay in Singapore "for the next 20, 30, 50 years". And Singapore continues to offer the right infrastructure and ecosystem for electronics manufacturing.

The Monetary Authority of Singapore (MAS), in its Macroeconomic Review on Monday, also said that while domestic cost pressures may drive less sophisticated production out of Singapore, high-end manufacturing activities should increasingly be anchored here. "Singapore's share of high-end products, such as semiconductors, has been fairly stable since the latter half of the 2000s, suggesting that such activities tend to display greater stickiness location-wise given their higher skill content and technological intensity," MAS added.

And that would be to the economy's benefit.

"I believe that it is important to still have some manufacturing capability in the electronics industry in Singapore. It complements the services sector, and gives a wide enough range of employment opportunities for a heterogeneous population. We're not all born bankers. You need diversity in your economy for long-term sustainable, healthy growth," says Mr Chong.

