



# Taiwan's Tech Industry

Reading Worksheet — Level F | [tahricteaches.com](https://tahricteaches.com)

Taiwan has emerged as one of the most consequential players in the global technology landscape. At the heart of this transformation lies the island's extraordinary expertise in **semiconductor** manufacturing. These tiny silicon chips power everything from smartphones to military hardware, and Taiwan's ability to produce the most advanced variants has positioned it at the centre of the modern digital economy.

The Taiwan Semiconductor Manufacturing Company, widely known as TSMC, is perhaps the most striking example of this industrial prowess. Founded in 1987 by Morris Chang, TSMC pioneered the concept of the dedicated **foundry** model — manufacturing chips designed by other companies rather than developing its own product lines. This approach proved revolutionary, enabling fabless companies such as Apple, NVIDIA, and AMD to focus exclusively on chip design while outsourcing production to specialist manufacturers.

Taiwan's technological strength does not rest on a single company alone. The island has cultivated a sophisticated industrial **ecosystem** comprising suppliers, logistics providers, research institutions, and engineering talent. This dense network allows firms to iterate rapidly, share knowledge informally, and respond to shifting market demands with remarkable agility. The synergy between large corporations and small-to-medium enterprises creates competitive advantages that rivals find extraordinarily difficult to replicate.

The concentration of semiconductor capacity in such a small geographic area carries profound **geopolitical** implications. Major powers, recognising their dependence on Taiwanese chips, have launched ambitious initiatives to build domestic production capacity. The United States, the European Union, and Japan have each committed hundreds of billions of dollars to incentivise chip manufacturing within their borders, fundamentally reshaping global trade relationships in the process.

Taiwan's technology sector extends well beyond semiconductors. Hsinchu Science Park, a thriving industrial **cluster** located south of Taipei, houses hundreds of companies spanning integrated circuits, flat-panel displays, and precision machinery. This geographic concentration of talent and capital has helped Taiwan maintain its competitive edge even as neighbouring economies invest heavily in high-technology industries, making the island's continued success a matter of profound global economic significance.

## A. Vocabulary

- |                       |                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------|
| 1. semiconductor ____ | a. introduction of new ideas, methods, or technologies that create commercial or social value         |
| 2. foundry ____       | b. strategic use of existing resources, skills, or advantages to maximise outcomes                    |
| 3. ecosystem ____     | c. position of supreme power or influence over others in a particular field or market                 |
| 4. geopolitical ____  | d. relating to the influence of geography on international politics and relations between nations     |
| 5. cluster ____       | e. material that conducts electricity under certain conditions, used to make electronic chips and com |
| 6. supply chain ____  | f. manufacturing facility that produces chips or components designed by other companies               |
| 7. dominance ____     | g. interconnected network of companies, institutions, and resources operating within a particular inc |
| 8. proprietary ____   | h. geographic concentration of interconnected businesses and institutions in a related industry       |
| 9. leverage ____      | i. sequence of processes involved in producing and distributing a product from origin to end consum   |
| 10. innovation ____   | j. owned and controlled by a specific company and protected by intellectual property rights           |

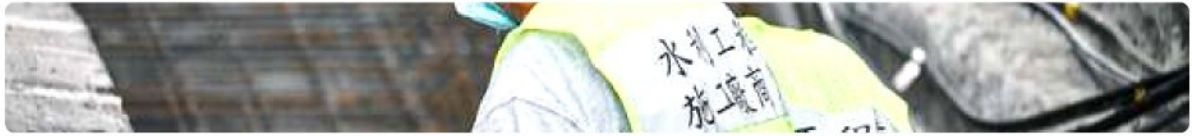
## B. True or False

- |                                                                                                                  |                                                                                                        |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| ____ 1. TSMC was founded by Morris Chang in 1987.                                                                | ____ 2. Taiwan produces the least technologically advanced semiconductor chips in the world.           |
| ____ 3. TSMC manufactures chips that are designed by other companies.                                            | ____ 4. Companies such as Apple and NVIDIA operate their own chip fabrication plants.                  |
| ____ 5. Taiwan's industrial ecosystem includes suppliers, research institutions, and engineering talent.         | ____ 6. Hsinchu Science Park is located north of Taipei.                                               |
| ____ 7. The United States and the European Union have invested in building domestic chip manufacturing capacity. | ____ 8. Taiwan's technology sector is limited exclusively to semiconductor production.                 |
| ____ 9. TSMC's foundry model allowed fabless companies to focus on chip design rather than manufacturing.        | ____ 10. Taiwan's concentration of semiconductor production has no significant political consequences. |

## C. Fill in the Blanks

**Word Bank:** semiconductor, foundry, ecosystem, geopolitical, cluster, supply chain, dominance, leverage

1. Taiwan's expertise in \_\_\_\_\_ manufacturing has made it indispensable to the global electronics industry.
2. TSMC's dedicated \_\_\_\_\_ model transformed how technology companies approach chip production worldwide.
3. The island's industrial \_\_\_\_\_ connects manufacturers, suppliers, and research institutions in a highly productive network.
4. The concentration of chip production in Taiwan has significant \_\_\_\_\_ consequences for major world powers.
5. Hsinchu Science Park is a thriving industrial \_\_\_\_\_ that houses hundreds of technology companies south of Taipei.



#### D. Comprehension Questions

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1. How did TSMC's foundry model change the way technology companies develop semiconductor products?
2. Why have countries like the United States and Japan committed significant investment to domestic chip manufacturing?
3. What factors contribute to Taiwan's sustained competitive advantage in the global technology sector?

#### E. Discussion Questions

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1. To what extent should countries prioritise building their own semiconductor manufacturing capabilities, and what are the risks of excessive dependence on a single nation for critical technology?
2. How might Taiwan's tech industry evolve over the next decade given increasing competition from China and South Korea, as well as government-funded chip initiatives in the United States and Europe?



# Answer Key

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**A. Vocabulary:** 1-e, 2-f, 3-g, 4-d, 5-h, 6-i, 7-c, 8-j, 9-b, 10-a

**B. True/False:** 1-T, 2-F, 3-T, 4-F, 5-T, 6-F, 7-T, 8-F, 9-T, 10-F

**C. Fill Blanks:** 1-semiconductor, 2-foundry, 3-ecosystem, 4-geopolitical, 5-cluster

**D. Comprehension:**

1. TSMC's foundry model allowed fabless companies such as Apple and NVIDIA to focus entirely on chip design while outsourcing manufacturing to specialist facilities, which was a revolutionary shift in how the industry operated.
2. These countries recognised their deep dependence on Taiwanese semiconductors and invested in domestic production to reduce geopolitical vulnerability and secure a stable supply of advanced chips.
3. Taiwan's advantage stems from its dense industrial ecosystem, the geographic concentration of talent and capital in areas like Hsinchu Science Park, and decades of accumulated expertise in semiconductor manufacturing.

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