



PESTLE ANALYSIS

TSMC





TSMC – Company Introduction

TSMC: Global Semiconductor Leadership

- **World's leading dedicated semiconductor foundry**, established 1987 in Taiwan's Hsinchu Science Park, pioneering the pure-play foundry business model by exclusively manufacturing for customers
- **Manufacturing excellence (data based on annual report 2023)**: Produces 11,895 distinct products using 288 different technologies, Serves 528 global customers across diverse industries, Operates multiple state-of-the-art GIGAFAB® facilities in Taiwan, with strategic expansion into Arizona and Japan
- **Core technological capabilities**: Advanced & specialty semiconductor technologies; 3DFabric® advanced packaging and silicon stacking; Comprehensive design ecosystem support; Industry-leading process technology development
- **Market leadership & presence**: Dual-listed on Taiwan Stock Exchange (TWSE) & New York Stock Exchange (NYSE); Serves major markets: High-performance computing, smartphones, IoT, automotive, digital consumer electronics; Maintains high capacity utilization through market diversification
- **Core values & commitments**: Integrity - Honesty and integrity as fundamental principles; Commitment - Delivering on promises to stakeholders; innovation - Continuous advancement in technology; Customer Trust - Building lasting partnerships; Environmental Sustainability - Leading industry in green practices



PESTLE ANALYSIS – TSMC

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POLITICAL FACTORS

- Government semiconductor incentives worldwide, including US CHIPS Act providing financial support for domestic production
- Trade policies and tensions affecting operations, particularly impacting equipment prices and availability
- Geopolitical uncertainties creating potential business disruptions and requiring constant monitoring
- Heavy dependence on major economies for revenue makes TSMC sensitive to political shifts



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ECONOMIC FACTORS

- Global macroeconomic challenges including weakening conditions, rising inflation, and higher interest rates
- Significant currency exchange risks, particularly between US Dollar and New Taiwan Dollar
- Cyclical nature of semiconductor industry leading to fluctuating demand and revenue
- Industry downturns and overcapacity risks affecting foundry services demand

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SOCIAL FACTORS

- Increasing market demand for energy-efficient computing solutions and sustainable technologies
- Significant challenges in recruiting and retaining skilled technical personnel
- Rapidly changing consumer preferences requiring quick adaptation of product offerings
- Need for continuous investment in talent development programs
- Growing importance of sustainability in consumer decision-making

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TECHNOLOGICAL FACTORS

- Continuous investment needed to keep pace with Moore's Law and advanced node development
- AI and HPC emerging as primary growth drivers for future development
- Cybersecurity threats requiring constant vigilance and security infrastructure updates
- Development of specialized technologies like N4X and N3X for high-performance computing
- Ongoing advancement in 2-nanometer and 14-Angstrom technologies



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LEGAL FACTORS

- Critical importance of protecting intellectual property rights, especially during overseas expansion
- Comprehensive environmental regulation compliance requirements across global operations
- Labor law compliance needs across multiple jurisdictions
- Necessity for workplace safety protocols and hazardous materials management
- Maintenance of international certifications including ISO 14001 and ISO 50001



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ENVIRONMENTAL FACTORS

- Climate change initiatives and formal adoption of TCFD recommendations
- Ambitious target of achieving net-zero emissions by 2050
- Vulnerability to natural disasters including earthquakes, typhoons, and droughts
- Implementation of comprehensive water management and energy conservation programs
- Focus on renewable energy adoption and greenhouse gas emission reduction