ITALIAN TRADE AGENCY
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CHINA'S MACHINE TOOL INDUSTRY, MARKET AND REGULATIONS

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Table of Contents

1. Machine Tool Industry in China

1.1 Overview of China's economy, market performance, and the main indicators of the machine tool industry (December 2024)

1.1.1 Main economy indicators (summary of the highlights)

- **Full-scale expansion in industrial output, particularly for the automotive manufacturing sector**

  In December 2024, the value-added of enterprises above the designated size grew by 6.2% year-on-year (in real terms).

  By sector, value-added of oil & gas mining industry grew by 2.2% year-on-year; value-added of electric machinery & equipment manufacturing industry grew by 9.7% year-on-year; and it is worth emphasizing that value-added of the automotive manufacturing industry displayed the largest growth by 17.7% year-on-year.

  By product type, the production of steel hit 119.1 million tons, up by 7.1% year-on-year; the production of cement hit 155.12 million tons, down by 2.0% year-on-year; and the production of new energy vehicles (EV) showed a tremendous increase of 43.2% year-on-year, achieving a production 1.647 million units.

- **Steady increase in the retail sales of consumer goods**

  In December 2024, total retail sales of consumer goods amounted to 4517.2 billion RMB, up by 3.7% year-on-year. Among them, retail sales of consumer goods excluding automobiles amounted to 3590.9 billion RMB, up by 4.2% year-on-year.

  By business location, retail sales of consumer goods in urban area amounted to 3844.5 billion RMB, up by 3.7% year-on-year; retail sales of consumer goods in rural areas amounted to 672.7 billion RMB, up by 3.8% year-on-year.

  By consumption type, food & beverage sales revenue amounted to 554.9 billion RMB, up by 2.7% year-on-year; commodity (other than food & beverage) sales revenue amounted to 3962.3 billion RMB, up by 3.9% year-on-year.

- **Stable rise in energy production**

  In December 2024, the energy production (coal, crude oil, natural gas, electricity) for industries above the designated size displayed a stable rise.

Energy type	Domestic production	Import
Coal	*0.44 billion tons (+4.2%)*	*52.4 million tons (+10.9%)*

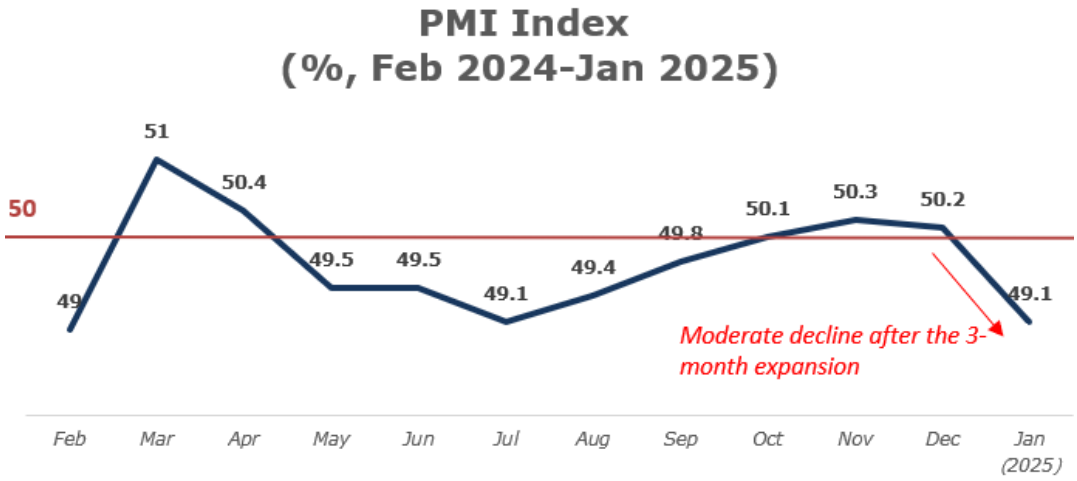
Crude oil	*17.9 million tons (1.4%)*	*47.8 million tons (-1.1%)*
Natural gas	*21.8 billion m^3 (6.2%)*	*131.7 million tons (+9.9%)*
Electricity	*846.2 billion KWH(+0.6%)*	/

- **Manufacturing PMI Index (January 2025)**

  In January 2025, the Purchasing Manager Index (PMI) for the manufacturing industry was 49.1% (1.1 percentage points lower than the previous month), indicating a moderate decline after a three-month consecutive expansion.

  Reasons for the industrial decline:

  1) Weaker industry dynamics with the approach of the Chinese New Year.
  2) Rising tariff uncertainties under the second-time Trump administration.



**Notes: A PMI index over 50 represents expansion within the manufacturing sector compared with the prior month; a reading under 50 represents contraction; and a reading at 50 indicates that the industry size remains unchanged.*

- **PMI and component indexes (%) of China's machine tool industry**

	PMI	Production	New order	Raw material inventory	Employee	Supplier delivery time

Feb 2024	49.1	49.8	49.0	47.4	47.5	48.8
Mar 2024	50.8	52.2	53.0	48.1	48.1	50.6
Apr 2024	50.4	52.9	51.1	48.1	48.0	50.4
May 2024	49.5	50.8	49.6	47.8	48.1	50.1
Jun 2024	49.5	50.6	49.5	47.6	48.1	49.5
Jul 2024	49.4	50.1	49.3	49.9	48.3	49.3
Aug 2024	49.1	49.8	48.9	47.6	48.1	49.6
Sep 2024	49.8	51.2	49.9	47.7	48.2	49.5
Oct 2024	50.1	52	50	48.2	48.4	49.6
Nov 2024	50.3	52.4	50.8	48.2	48.2	50.2
Dec 2024	50.2	52.1	51	48.3	48.1	50.9
Jan 2025	49.1	49.8	49.2	47.7	48.1	50.3

- The manufacturing industry displayed a slight contraction, after the three-month consecutive rise.
- The production activity of the manufacturing enterprises shows a mild slowdown.
- The new market order of the manufacturing industry is going down.
- Inventory of the raw materials is significantly decreasing.
- The unemployment situation of the manufacturing industry is still worsening.
- The delivery time of the raw materials is increasing by a narrow margin.

1.1.2 Machine Tool Industry Indicators

- According to data from China Machine Tool Industry Association, in the entire year of 2024, the operating income of the machine tool industry achieved 1,040 billion RMB, down by 5.2% year-on-year. Among them, the operating income of metal-cutting machine tools achieved 168.7 billion RMB, up by 6.3% year-on-year; the operating income of metal-forming machine tools achieved 93.0 billion RMB, up by 4.4% year-on-year.

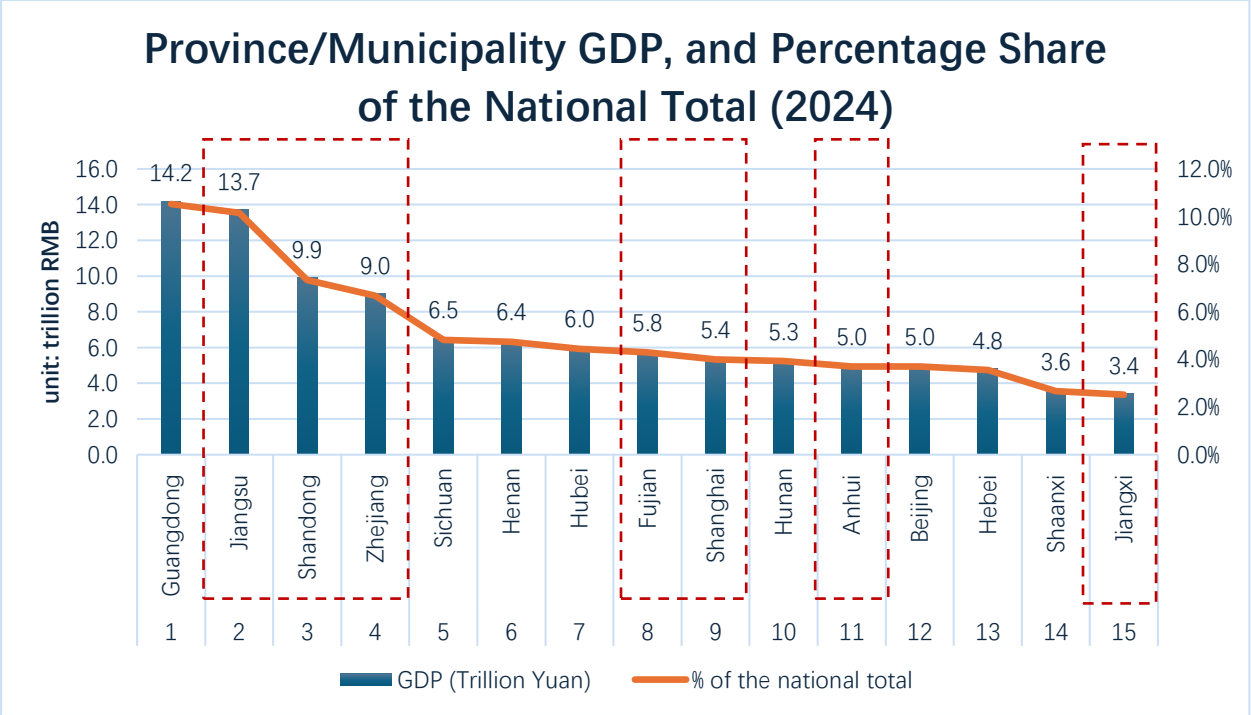
- In the entire year of 2024, the international trade volume of machine tool products hit 31.9 billion USD, down by 0.3% year-on-year. Among them the import volume hit 10.2 billion USD, down by 8.6% year-on-year; the export volume hit 21.7 billion USD, up by 4.0% year-on-year.
- In the entire year of 2024, for enterprises above the designated size, the production (value) of metal-processing machine tools hit 205 billion RMB, up by 5.1% year-on-year. Among them, the production of metal-cutting machine tools hit 121.8 billion RMB, up by 6.4% year-on-year; the production of metal-forming machine tools hit 83.2 billion RMB, up by 3.2% year-on-year.
- In the entire year of 2024, new orders for metal-processing machine tools increased by 5.5% year-on-year; existing orders on hand increased by 10.8% year-on-year.

1.2. Overview of eastern China cluster

1.2.1 Market landscape

The eastern China cluster consists of seven provincial regions/municipalities, including Shanghai, Jiangsu, Zhejiang, Anhui, Fujian, Jiangxi, and Shandong.

- This cluster is considered one of the most developed areas in China, and contributes about 38.78% of China's gross GDP in 2024.
  (framed in brown: eastern China cluster provinces)



Source: Provincial statistical bureaus, 2024

- As a core region for China's industrial development, the eastern China cluster is in a leading position across a wide range of sectors (in China), such as light industry, machinery, electronics, and automotive manufacturing.
- This region also plays a crucial role in China's machine tool industry, containing also the majority of foreign machine tool companies in China.
- Highlights: Jiangsu province has exceptional performance in the field of advanced manufacturing and accommodates the largest number of national-level industrial clusters. Key industries include automotive manufacturing (e.g. vehicle and associated parts), high-end equipment (e.g. aviation) manufacturing, and electronic information technology.

1.2.2 Major market players in China's eastern cluster

77 out of 96 companies analyzed in previous newsletters are located in the East China region, including Jiangsu, Shanghai, Shandong, and Zhejiang. Below is an overview of the companies located in these different East China provinces/municipalities, respectively:

Machine tool companies headquartered in Zhejiang province:

Company name	HQ location	Country of Origin
Youjia International CNC Machine Tool Co., Ltd. (FFG)	Zhejiang	Taiwan (China)
Ningbo Hurco Trading Co. Ltd.	Zhejiang	US
Yuhuan Numerical Control Machine Tools Co., Ltd.	Zhejiang	China
Sijin Intelligent Forming Machinery Co., Ltd.	Zhejiang	China
Zhejiang Haideman Machine Tools Manufacturing Co., Ltd.	Zhejiang	China
JDM Jingda Machine (Ningbo) Co., Ltd.	Zhejiang	China
Zhejiang Tianma Bearing Group Co., Ltd.	Zhejiang	China
Zhejiang Rifa Precision Machinery Co., Ltd.	Zhejiang	China
Ningbo Haitian Precision Machinery Co., Ltd.	Zhejiang	China

MCM China Zhejiang Maximu Precision Machine Tool Co., Ltd.	Zhejiang	Italy

Machine tool companies headquartered in Shandong province:

Company name (English)	HQ location	Country Of Origin
Doosan Machine Tools (China) Co., Ltd.	Shandong	South Korea
Weihai Huadong Automation Co., Ltd.	Shandong	China
Kede Numerical Control Co., Ltd	Shandong	China
Pietro Carnaghi Trading Co., Ltd.	Shandong	Italy

Machine tool companies headquartered in Shanghai:

Company name	HQ location	Country Of Origin
Okuma Machine Tool (Shanghai) Co., Ltd.	Shanghai	Japan
Johnford Trading (Shanghai) Co., Ltd.	Shanghai	Taiwan (China)
Taichung Prevision Machinery (Shanghai) Co., Ltd (Victor Taichung)	Shanghai	Taiwan (China)
DMG Mori	Shanghai	Japan
Yamazaki Mazak (China) Co., Ltd.	Shanghai	Japan
GF Machining Solutions (Shanghai) Ltd	Shanghai	Switzerland
Starrag Machine Tool (Shanghai) Co., Ltd.	Shanghai	Switzerland
Tornos Trading (Shanghai) Co., Ltd.	Shanghai	Switzerland
Schaublin (Shanghai) Machine Tool Co., Ltd.	Shanghai	Switzerland

Mikron Industrial Equipment (Shanghai) Co., Ltd.	Shanghai	Switzerland
Fashi Machine Tool Technology (Shanghai) Co., Ltd.	Shanghai	France
DANOBAT Group （China）	Shanghai	Spain
Haas Automatic CNC Machinery (Shanghai) Co., Ltd.	Shanghai	US
MAG Industrial Automation System (Shanghai) Co., Ltd.	Shanghai	US
Hermle (Shanghai) Instrument Technology Co., Ltd.	Shanghai	Germany
ViciVision Metrology Technology (Shanghai) Co., Ltd.	Shanghai	Italy
Sit Indeva (Shanghai) Ltd.	Shanghai	Italy
Salvagnini International Trading (Shanghai) Co., Ltd.	Shanghai	Italy
Pama Machine Tool Co., Ltd.	Shanghai	Italy
Richfaith (Shanghai) Machinery Ltd.	Shanghai	Italy
NUM Numerical Control Technology (Shanghai) Co., Ltd.	Shanghai	Italy
Rieckermann Industrial Technologies (Shanghai) Co., Ltd.	Shanghai	Italy
Marposs (Shanghai) technologies Co., Ltd. Head Office	Shanghai	Italy
FFG Europe Machinery Co., Ltd	Shanghai	Italy
HSD Mechatronic (Shanghai) Co., Ltd.	Shanghai	Italy
Shanghai Camozzi Automation Control Co., Ltd.	Shanghai	Italy
Shanghai GT Automation Equipment Co., Ltd.	Shanghai	Italy
FPT China WFOE	Shanghai	Italy
Fidia JVE	Shanghai	Italy
Elesa+Ganter China Co., Ltd.	Shanghai	Italy
Davi Trading (Shanghai) Co., Ltd.	Shanghai	Italy
Cemb Hofmann Shanghai	Shanghai	Italy
Luhance Intelligence Technology	Shanghai	Italy

Belotti (Shanghai) Machine Tools Trade Co. Ltd	Shanghai	Italy
AZ International	Shanghai	Italy
Automator China	Shanghai	Italy

Machine tool companies headquartered in Jiangsu province:

Company name	HQ location	Country of Origin
Gleason Gear Technology (Suzhou) Co., Ltd.,	Jiangsu	US
Hardinge Machine Shanghai Co., Ltd.,	Jiangsu	US
Bucci Industries China	Jiangsu	Italy
Comau (Kunshan) Automation Co., Ltd.	Jiangsu	Italy
Yangzhou Grasspa Machinery	Jiangsu	Italy
Parlec Machinery (Nanjing) Co.	Jiangsu	Italy
Kunshan Haboer Automation Co., Ltd.	Jiangsu	Italy
Prima Power Suzhou Co., Ltd.	Jiangsu	Italy
Rollon Ltd.	Jiangsu	Italy
Sacma Machinery Wuxi	Jiangsu	Italy
Samp Group	Jiangsu	Italy
Silmax Precision Tools (Wuxi) Co., Ltd.	Jiangsu	Italy
Speroni Machinery (Nanjing) Co., Ltd.	Jiangsu	Italy
Suzhou Rijin Machinery Co., Ltd. Trevisan Machine Tool Company China Office	Jiangsu	Italy
Suzhou Vigel Technical Service Co., Ltd.	Jiangsu	Italy
Neway CNC Equipment (Suzhou) Co., Ltd.	Jiangsu	China
Jiangsu Yawei Machine Tool Co., Ltd.	Jiangsu	China

Nantong Guosheng Electromechanical Industry Co., Ltd.	Jiangsu	China
Wuxi Huadong Heavy Machinery Co., Ltd.	Jiangsu	China
Hiecise Precision Equipment Co., Ltd.	Jiangsu	China
TRUMPF China Co., Ltd.	Jiangsu	Germany
INDEX Machine Tools (Taicang) Co., Ltd.	Jiangsu	Germany
EMCO Machinery (Taicang) Co., Ltd	Jiangsu	Austria
Fagor Forging Machine Tools (Kunshan) Co., Ltd.	Jiangsu	Spain
Makino Machine Tool (China) Co., Ltd.	Jiangsu	Japan
Suzhou Dongyu Machine Tool Co., Ltd. (Tongtai)	Jiangsu	Taiwan (China)
Jiangsu Hyundai Wia Co., Ltd.	Jiangsu	South Korea

1.2.3 Main upstream sectors

The upstream sectors of the machine tool industry encompass a broad spectrum of products, ranging from rough structural components (e.g. castings) to sophisticated core parts (e.g. CNC systems and electric spindles). These products have a direct impact on the effectiveness and reliability of machine tools.

Main upstream sectors	Main products
Precision parts	▪ Lead screw (ball screw): used to achieve high-precision linear motions; an important part of the transmission system of CNC machine tools. ▪ Linear guide: providing high-precision linear motion support to ensure the stability and accuracy of machine tool operation. ▪ Bearing: referring to spindle bearings, ball bearings, etc., mainly used to support the rotating parts and reduce friction.

	▪ Spindle unit: one of the core components of the machine tool; is responsible for driving the rotation of the tool or workpiece, which directly affects the machining accuracy and efficiency.
Functional parts	▪ Tool magazine: used to store and manage the tools required by the machine tool; realizing quick replacement of tools through an automatic tool changer. ▪ Gears: used to transmit power and change the movement direction. ▪ Milling head: used to install the milling cutter and achieve cutting processing. ▪ Tool holder: used to fix and support tools and is an important component of lathes and milling machines. ▪ CNC turntable: serving as the fourth or fifth axis of the machine tool to achieve multi-angle and multi-faceted processing.
CNC system	▪ Control unit: responsible for processing instructions and controlling the motion trajectory of the machine tool; applied in point control, linear control and contour control systems. ▪ Servo drive system: realizing closed-loop, semi-closed-loop or open-loop control to ensure high-precision motion. ▪ Software module: used for programming, simulation processing and data processing, such as macro programs and interpolation functions.
Castings	▪ Lathe bed casting: ensuring the rigidity and stability of the overall structure of the machine tool. ▪ Guide castings: supporting and guiding moving parts; ensuring precision and durability.

Notes:

- Precision components-- Jiangsu Province (Suzhou and Wuxi city) serves as the core area for precision manufacturing, and is also the home to numerous

high-end ball screw & linear guide manufacturers, while Zhejiang Province (Ningbo and Taizhou city) is renowned for high-precision gear and bearing manufacturing.

- Functional parts-- Zhejiang Province (Wenzhou and Ningbo city) is well-known for power chucks and CNC turntables; while Jiangsu province (Changzhou and Kunshan city) is home to spindles & tool holder manufacturers.

1.2.4 Main downstream sectors

The major downstream applications of the machine tool products encompass automobiles, molds, 3C (Computer, Communication, Consumer Electronics), airplanes, ships, construction machinery, and metallurgy industry.
Below is a geographical features summary of the downstream sectors in Eastern China:

Sector	Geographical features
Automotive	▪ Yangtze River Delta (Shanghai, Jiangsu, Zhejiang) is among the leading clusters for the auto sector. ▪ Shanghai and Guangzhou are in the leading positions for NEV and smart automobiles production, while Anhui and Zhejiang provinces are catching up.
Mold	▪ Yangtze River Delta is in the leading position for mold making. ▪ Ningbo City (Zhejiang), is known as the "Hometown of Molds in China", and has the largest mold industry cluster in the whole country; Shanghai and Suzhou have an edge in the manufacturing of high-end precision molds.
3C	▪ Suzhou (Jiangsu) has an edge in 3C products production, and stands out in precision manufacturing.
Aerospace	▪ The aerospace industry in China's eastern cluster has developed rapidly in recent years. ▪ Shanghai has built up a strong synergy with Jiangsu and Zhejiang in the fields of large aircraft manufacturing, R&D (for drones), and airport economy (development of industrial ecosystems centered around airports, designed to facilitate

	global trade and boost regional economic growth).
Ship building	▪ Highly concentrated in the eastern cluster, with Zhejiang, Jiangsu, and Shanghai collectively accounting for 74.1% of total ship completions (OECD, 2019) in China.
Construction machinery	▪ The construction machinery sector is concentrated in the eastern cluster (Shandong, Jiangsu) and has been expanding into the central regions like Hunan.
Metallurgy	▪ The metallurgy industry is mainly located in northern (Tangshan, Hebei) and northeastern (Anshan, Liaoning, Benxi) regions, rather than in the eastern cluster.

1.3. Overview of the upstream industry, enterprise geographical distribution and the supply trends

1.3.1 Overview of the precision parts industry

The precision parts mainly consist of spindles, screws, linear guides as well as bearings (as illustrated in 1.2.3), and play a critical role in improving the performance, accuracy as well as efficiency of machine tools.

- The domestic screw & linear guide market is monopolized by foreign companies, primarily Japanese and Taiwanese (China) companies. Foreign enterprises possess in total 65% of the market share in China according to Soochow Securities in 2023. (Taiwanese companies like HIWIN and PMI occupy 50% of the market share; Japanese companies like NSK and THK occupy about 15% domestic market share).
- Regarding the bearing market, the high-end segment is dominated by leading multi-national companies such as SKF, Schaeffler, NSK, JTEKT, NTN, TIMKEN, NMB, and NACHI; while mid-to-low-end segment is mostly filled by domestic manufacturers.

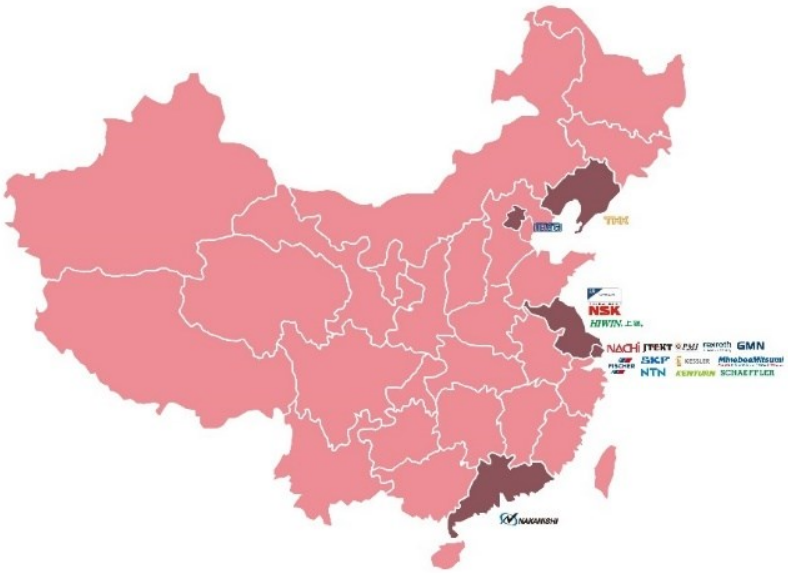
1.3.2 Enterprise geographical distribution

Below is a list of leading producers of CNC precision parts and their major business locations in China:

Company Name	Main products	Country of Origin	Chinese HQ
NACHI	Bearing	Taiwan (China)	Shanghai
NMB	Bearing	Japan	Shanghai
JTEKT	Bearing	Japan	Shanghai
HIWIN	Ball Screws, Linear Guides, Bearing	Taiwan (China)	Suzhou city, Jiangsu province
PMI	Ball Screws, Linear Guides	Taiwan (China)	Shanghai
THK	Ball Screws, Linear Guides	Japan	Dalian city, Liaoning province
NSK	Ball Screws. Spindle bearings	Japan	Suzhou city, Jiangsu province
SKF	Ball Screws, Spindle bearings	Sweden	Shanghai
NTN	Spindle bearings	Japan	Shanghai
Schaeffler	Ball Screws, Spindle bearings	Germany	Shanghai
Bosch Rexroth	Ball Screws, Spindle bearings	Germany	Shanghai
Westwind Air Bearings	Spindles	UK	Suzhou city, Jiangsu province
Kessler	Spindles	Germany	Shanghai
GMN	Spindles	Germany	Shanghai
Kenturn	Spindles	Taiwan (China)	Shanghai

FISCHER PRECISE	Spindles	Switzerland	Shanghai
IBAG	Spindles	Switzerland	Beijing
NAKANISHI	Spindles	Japan	Shanghai, Shenzhen

Leading precision parts producers in China



Source: ITA Machine Tool Desk, In3act Analysis

1.3.3 Supply trends of precision parts industry

Driven by policy agenda-- until now, China's precision parts production is still in the early stage of localization, far from the localization targets set in "Made in China 2025" (localization rate: intelligent CNC system 80%, spindles 30%, screws 80%, guide rails 80%). Given the fact that China's (mid-to-high-end) machine tool precision parts supply still heavily relies on imports, primarily from Japan and Germany, Chinese government is expected to stimulate the domestic supply of precision parts through policy measures in the near future. This trend is also boosted by the continuous technological breakthroughs on the domestic level,

which further enhances the market demand and creates new business opportunities.

Invigorated by downstream demands-- rising demand for high-precision parts from downstream industries, such as aerospace, automobiles, and military, is driving the precision parts technology upgrades and industrial expansion.

The statistics below indicates the growing market potential in China's precision parts industry:

- In 2023, the market size of China's ball screw industry was approximately 3.1 billion RMB with the compound growth rate of 10.18% from 2014 to 2023. *(source: Huajing Industry Research Institute*).
- China's linear guide industry market size in 2020 was approximately 516 million USD and is expected to reach 821 million USD in 2027, accounting for approximately 28.67% of the global market share (*source: China Baogao, 2023*).
- China's machine tool bearing market size was projected to reach 278.5 billion RMB in 2023, a year-on-year increase of 10.82%. China has become the world's third-largest bearing producer after Japan and Sweden, with bearing output reaching 27.5 billion sets in 2023, a year-on-year increase of 6.18% (*source: China Baogao, Intelligence Research Group, 2023*).

2 Machine Tool Industry Market Access Strategy

2.1 General guidance on gradually entering the Chinese market—establishing the presence step-by-step

In consideration of the risks involved in market entry/business expansion process, a gradual strategy is a prudent approach for foreign machine tool manufacturers to adopt in China. By aligning the entry roadmap with the resource capabilities, risk tolerance level and external market conditions, companies can achieve a long-term success in the Chinese market. This strategy typically involves several phases (should be adjusted as per the specific situation):

Phase 1-- Market research and industry analysis

Understanding the local market landscape, consumer behavior, regulatory

environment, and the intensity of competition is crucial. Companies should also be aware of China's evolving policy agenda.

Phase 2-- Building relationships (Guanxi)

Establishing a strong Guanxi with local partners and government entities can help foreign machine tool manufacturers navigate the business landscape and seize profitable projects.

Phase 3-- Starting with direct exports

Before setting up actual business entities in China, companies can start by exporting machine tool products, as a way to test the water and build brand recognition.

Phase 4-- Forming strategic alliances

Partnering with local firms can provide valuable market knowledge, reduce operating risks and facilitating the access to Chinese consumer base.

Phase 5-- Setting up offices (e.g. representative offices & joint ventures, wholly foreign-owned enterprises)

Operating an actual business entity in China market is a more direct way to reach Chinese customers and obtain fast-changing market insights.

Phase 6-- Scaling-up operations

After gaining an initial foothold in China market, companies can gradually ramp up the operations, expand the product portfolio, and increase the investment, in order to achieve higher profits and an economy of scale.

2.2 Specific entry strategies for foreign machine tool companies to opt for

1) **Policy-driven access strategy-- aligning with China's national policy initiatives**

It is widely known that China's economy is largely driven by the state policy. By syncing with China's overarching policy agenda, companies can often enjoy ample opportunities for growth, abundant subsidies as well as lower bars of market entry/industrial regulations. This is also the reason for Comau's boom and flourishing in China, as an international enterprise founded in Italy and has rooted in China for 27 years-- Comau has been making efforts in aligning the company

agenda with China's overarching policy initiatives, which in recent times, points to Sustainability & Green Transformation.

A representative case is that in July 2024, Comau premiered a new electric mobility module in Shanghai that features a hairpin stator and has the capability to improve the manufacturing process & sustainability of NEVs. "Hairpin stator (allowing for a stronger rotation of the rotor and more torque at the wheels) would help EV's manufacturing with enhanced cost-efficiency, flexibility, and performance, for repetitive tasks could be taken over with more labor being put into sections that need them more", said Stefania Ferrero, Comau's chief marketing officer. Beyond the electric mobility module, Comau is also investing heavily in the R&D for a wide range of creative solutions and mass production capacities in China. Up until now, Comau has delivered more than 140 large EV assembly projects in China, accounting for roughly 50 percent of global assembly line projects. Its customer includes GM, Geely, NIO, SAIC, many other Chinese EV companies.

2) Service-oriented access strategy-- enhancing after-sales service & support for Chinese customers

Outside of the product quality itself, thoughtful after-sales service is also an important factor for foreign machine tool manufacturers to win over Chinese customers. Take PAMA's success in China market for example:

Local service centers-- PAMA has established service centers across China and recruited local experts in order to provide timely after-sales support (maintenance, repair, technical consulting) for Chinese customers. The prompt response with expertise ensures minimal downtime for customers, helping build up a long-term trust relationship and thus separating Pama from many European machine tool brands that are often labeled slow and unprofessional.

Spare parts availability-- PAMA has been maintaining the local factories of spare parts to ensure quick availability and short lead times in response to consumer requests.

Training programs-- PAMA is offering training programs for Chinese customers to ensure proper operation and maintenance of the machines sold.

3) High-tech access strategy-- honing advanced technology for competitive advantages

As a core strength of foreign machine tool manufacturers in China, advanced technology enables foreign enterprises to compete in China's high-end and profitable market segments, such as aerospace, railway and EVs, leaving the large number of domestic enterprises behind (Chinese domestic machine tool enterprises are mostly competing in the mid-to-low-end market segments, usually with narrow profit margins).

A real-life example to be highlighted is the LASERTEC 20 PRECISIONTOOL from DMG MORI. Labeled as a new dimension of precision tool machining, the LASERTEC 20 PRECISIONTOOL is a highly-dynamic 5-axis precision machine in the portal design with 5 um positioning accuracy and a compact footprint of only 3.5 m^2. Linear drives in the X-Y-Z-axis with an integrated swivel rotary table equipped with torque technology allow highly dynamic machining. This cutting-edge technology, oftentimes witnessed in high-end machine tool segments, allows contact-free machining, without the need of electrodes and without tool wear; and is applied in the production of chip free cutting edges, relief angles and chip breakers in PCD, CVD-D and CBN.

4) Collaborative entry strategy-- cooperating with Chinese local enterprises

In an increasingly competitive market landscape, collaborating with Chinese local enterprises can ease the access of foreign machine tool manufacturers to Chinese customers. The basket of measures include:

- ✓ Collaborating with local distributors with existing sales networks.
- ✓ Hiring local talents who have better market knowledge and cultural understandings.
- ✓ Forming strategic partnerships with Chinese companies to leverage their market access, manufacturing capabilities and government relationships.

A vindication of the argument-- In February 2023, Trumpf, a German enterprise founded in 1923 and launched the German Industry 4.0 Strategy, formed a strategic partnership with Llin Laser (a Chinese laser company) in TruFibre G multifunctional laser source. Through resource sharing, business innovation and complementary advantages, an improved laser service can be provided to customers purchasing laser-related products. (Laser source is the core component of the fiber cutting machine and is the heart of laser equipment. A good-quality laser source can extend the service life of the equipment as well as improve the processing quality of machine tool products).

3 Market Access Model in China

It’s crucial for Italian machine tool companies to choose an access model that aligns with their overarching strategic objectives, before entering the Chinese market. Companies should take several factors into consideration for decision-making, including market demand, company size, available resources, product technical requirements, and the policy environment.

3.1 Most common access models for Italian machine tool manufacturers:

Distributor & Agent Model

Overview

Distributor: A distributor purchases machine tool products from Italian companies, owns inventory, and sells the products through its own channels in the Chinese market.

Agent: Acts as an intermediary to facilitate transactions, earning commissions without owning the products.

Suitable Scenarios

Initial Market Testing: Ideal for Italian companies firstly entering the Chinese market, especially with limited resources and an immediate need for reaching out to Chinese customers.

Mid-to-Low-End Machine Tool Market: Suitable for ordinary products where local channels are adequate for product promotion and sales.

Advantages

Low Cost, Low Risk: Minimal upfront investment means a reduction of the financial burden.

Quick Market Access: Able to leverage the local distributors' network and customer base for swift market penetration.

High Flexibility: Cooperating patterns can be adjusted to fit the changing market demands, allowing for quick adaptions.

Disadvantages

Limited Control: Loose control over brand image, pricing, and risk management mechanisms (largely dependent on the distributor & agent performance).

Compressed Profit Margins: Local distributor & agent needs to share a certain portion of profits.

Potential conflicts: Different distributors & agents can maliciously compete against each other for business and sometimes cause trouble to the machine tool exporters.

Representative Office Model

Overview

A representative office is a non-independent entity aimed at market research, customer liaison, and brand promotion. It cannot engage in direct sales or contract-signing activities.

Suitable Scenarios

Market Probing: Ideal for companies that wants to operate in China and have not gained a deep understanding of the local market (e.g. customer demand, competitive landscape).

Long-Term Strategy Preparation: As a transitioning step for companies planning to establish a Wholly Foreign-Owned Enterprise (WOFE) or Joint Venture (JV) in China in the future.

Advantages

Low Cost: The setup and operating expenses are lower compared to WOFE and JV models.

Minimal Risk: Risks are minimized without engaging in direct business activities.

Disadvantages

Limited Functionality: No direct sales profit; cannot provide localized after-sales services (essential in the machine tool industry).

Policy Complications: Representative offices face strict regulations and must regularly update their registration information.

Trading Wholly Foreign-Owned Enterprise Model (Trading WOFE)

Overview

A Trading WOFE allows foreign companies to conduct business operations in China-- directly importing machine tool products from Italy and selling in the Chinese market.

Suitable Scenarios

Mid-to-High-End Machine Tool Market: For companies looking to directly manage their brand image and customer relationships。

Stable Demand: Ideal for companies that have already attracted decent market demand through distributors & agents and wish to transition to direct sales for a larger market presence.

Advantages

Comprehensive Control: A full-scale control over pricing, marketing, and after-sales services ensures independent business operations and brand management activities.

Profit Retention: Increasing profit margins by eliminating the intermediaries.

Beneficial Policy: China offers preferential tariffs for high-end machine tool equipment imports (which is the target market segment of a Trading WOFE).

Disadvantages

High Volume of Investment: Including setting up a company, hiring local staff, and establishing logistic networks.

Bigger Market Risk: The company will suffer from losses without a sufficient demand.

Manufacturing Wholly Foreign-Owned Enterprise (Manufacturing WOFE)

Overview

A Manufacturing WOFE involves establishing a wholly owned factory in China in order to produce and sell machine tool products, with full ownership and control over business operations.

Suitable Scenarios

Long-Term Market Commitment: For sectors with large, stable, and long-term demand, such as automotive and aerospace sectors.

Made-in-China Products: Ideal for products that benefit from China's low labor costs and well-established supply chain.

Customization: A WFOE allows foreign companies to have complete control over the product design, manufacturing and customization processes. This is particularly important when engaging with Chinese buyers with specific demands and industrial needs.

Direct access to China's Industrial Market: A WFOE ensures direct access to the market without the complexities of sharing control with local partners. This is especially important for companies targeting premium market segments where brand reputation and quality assurance are paramount.

Market Dominance in Niche Segments: For foreign companies with specialization/advanced technology, it is a popular choice to achieve the leading position niche market segments. Large profits can be obtained by offering unique technology and solutions for local needs.

Advantages

Cost Advantages: Local production reduces manufacturing and logistics costs.

Policy Support: China offers tax breaks and land incentives for foreign investors to set up a Manufacturing WOFE high-end manufacturing sectors.

Fast Response: Local production allows for prompt market response.

Manufacturing Wholly Foreign-Owned Enterprise (Manufacturing WOFE)- continued

Disadvantages

High Volume of Investment: A significant amount of capital is required for the factory setup, equipment purchase, and technology transfer processes.

High Management Complexity: Compliance with local labor laws, environmental regulations, and other relevant policies adds complexity to the factory management.

Intellectual Property Risks: Manufacturing in China may expose the company to potential IP risks.

Joint Venture (JV) Model

Overview

A Joint Venture (JV) involves partnering with a local Chinese company to create a new business entity-- sharing resources, risks, and benefits.

Suitable Scenarios

Policy-Restricted Industries: It is compulsory for foreign companies, in certain industries, to form partnerships with local firms in order to operate in China market.

Localization and Resource Integration: Joint ventures allow foreign companies to leverage the local expertise, production resources, sales channels and brand reputation of the partner Chinese companies.

Cost Advantages and Risk Sharing: Joint ventures with a Chinese counterpart can help reduce operational costs for foreign companies (therefore enhancing competitiveness), particularly in the manufacturing sector where they can take advantage of China's lower labor and resource costs. Also, the management risks can be shared through Joint Ventures.

Technology and Innovation Cooperation: Foreign companies can closely collaborate with Chinese companies to leverage local technology for research and innovation.

Advantages

Risk Sharing: Risks and investment costs are shared with the local partner.

Resource Integration: Able to leverage the local partner's industry networks, technology resources, and customer relationships.

Quick Market Access: Can help bypass the regulatory barriers, such as government procurement qualifications.

Disadvantages

Shared Control: Decision-making may be slower due to potential disputes with the local partner.

Intellectual Property Risks: Sharing proprietary technologies with a local partner increases the risk of intellectual property leakage.

3.2. Strategic decision-making for the market access model

- **Resource and Capability Assessment**

Managers must evaluate their financial resources, technical capabilities, and management experience to decide which model best suits the company's needs.

Financial Resources-- Companies with a significant amount of capital may consider higher-risk models like Trading WOFE or Manufacturing WOFE.

Technical Capabilities-- Companies with advanced technology may benefit from direct control models like Trading WOFE or Manufacturing WOFE, while those in need of technical support could consider Joint Ventures.

Management Experience Companies with experiences managing local operations may opt for complex models like WOFE, while those lacking relevant experiences may prefer simpler models like distributors & agents or representative offices.

- **Risk Management and Control**

Access models entail different levels of risk.

High Control, High Risk: A Trading WOFE and Manufacturing WOFE provides greater control but comes with higher investment and operational risks.

Low Control, Low Risk: Distributors and representative offices minimize risk, but provide less control over market operations.

4. Trade Exchange Data in the Machine Tool Industry between Italy and China (January - October 2024)

Italy's machine tool imports and exports worldwide (in millions of euros, January – October 2024)

	Import			Export		
	Value	YOY change 2023-2024	Percentage share	Value	YOY change 2023-2024	Percentage share
Asia	237.4	-44.5%	27.7%	589.8	+9.7%	18.6%
Oriental Asia	229.7	-44.1%	26.8%	255.5	-6.5%	8.1%
China	59.0	-15.7%	6.9%	190.31	-9.0%	6.0%
Worldwide total	857.6	-41.2%		3173.1	+5.7%	

Italy's machine tool imports and exports with China by category (in millions of euros, January – October 2024)

Marked blue are the respective indicators for worldwide total

		Value	YOY change	Share of worldwide total
Metal-cutting machine tools	Import	23.2 (568.1)	-17.6% (-41.2%)	4.1%
	Export	142.0 (1348.1)	-8.9% (+2.9%)	10.5%
Metal-forming Machine tools	Import	12.6 (154.7)	-15.8% (-40.6%)	8.2%
	Export	34.0 (1460.3)	+15.1% (+6.5%)	2.3%
Non-conventional technology machine tools	Imports	23.6 (134.7)	-13.6% (-41.8%)	17.2%
	Exports	14.3 (364.7)	-39.9% (+13.2%)	3.9%

Key takeaways from the data above:

- According to data from January to October 2024, Italy's machine tool import was significantly dropping on a global basis. In terms of machine tool export, Italy was pivoting the focus onto southeast Asian countries, with an upward trend being observed (but a downward trend for other Asian countries).
- According to data from January to October 2024, Italy's machine tool trade with China, both export and import, was decreasing comprehensively. China's import of metal-forming machine tools was still increasing (+15.1% year-on-year) but on a much smaller scale compared to the previous month (+35.2% year-on-year).

5.Tenders and bids (February 2025)

Announcement of Centralized Procurement of Desktop Lathes for the Integrated Upgrade Project of Waste Aluminium Recycling and Green High-end Aluminium Alloy

Required by Gansu Dongxing Jiaxin New Materials Co., Ltd. **Action deadline: Feb 11, 2025**
Announcement of the Electric Spark Numerical Control Wire Cutting Machine Procurement Project Required by Shanghai Zhenhua Heavy Industry (Group) Co., Ltd. **Action deadline: Feb 12, 2025**
Tender Announcement for the Φ 350 CNC Lathe Required by Luoyang Bearing Group Co., Ltd. **Action deadline: Feb 12 , 2025**
Announcement of the Model Factory Update 5 Woodworking Equipment Project Required by Double (Deyang) Heavy Equipment Co., Ltd. **Action deadline: Feb 16 , 2025**
Announcement of Steel Processing Equipment for WMGDSG-3 Project Management Department of Wumei Railway (Guangdong Section) Required by Equipment Centralized Tendering and Procurement Center of China Railway 25th Bureau Group Co., Ltd. **Action deadline: Feb 16 , 2025**
Announcement of the Machine Tool Cutting Tools Procurement Project Required by Dothink Group **Action deadline: Feb 17, 2025**
Announcement of Tianjin Iron Works Co., Ltd - Roller Welding Device Procurement Project Required by Dothink Group **Action deadline: Feb 17, 2025**
Tender Announcement for Procurement Project of Precision CNC lathe Required by State owned Sida Machinery Manufacturing Company

Action deadline: Feb 20, 2025
Tender Announcement for Procurement Project of lathe Required by Shenyang Micro Control Flywheel Technology Co., Ltd. **Action deadline: Feb 20, 2025**
Tender Announcement for Procurement Project of 5-meter Vertical Lathe and Other Equipment Required by Luoyang Axle Research Technology Co., Ltd. **Action deadline: Feb 21, 2025**
Tender Announcement for Procurement Project of Heavy Duty Inclined Bed CNC Lathe Required by Ansteel Group Zhongyuan Industrial Development Co., Ltd. **Action deadline: Feb 28, 2025**