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Market Research on China Packaging Machinery Industry

July 11, 2016

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INTRODUCTION

Objectives

This research report was conducted with three key objectives:

1. Provide an update on the high-level overview of the packaging machinery industry value chain, concerning supply and demand of key equipment involved in the packaging process

2. Analyze the competitive landscape, e.g. key packaging machinery suppliers in China, and key target customers such as multinational retail brand product manufacturers and retailers

3. Identify key market trends, potential barriers and opportunities for Italian manufacturers interested in approaching and/or entering the Chinese market, and provide practical considerations

Conducting market research in China and our methodology

- Generally speaking, conducting market research in China is different and significantly more challenging than it is in developed countries because of 1) the size and diversity of the country; 2) lack of fully reliable centralized / official information databases; 3) constant and extremely rapid change – the whole Chinese economic system is far from being in equilibrium

- Therefore solid market research work must be based on multiple resources and activities

- Our methodology leverages a combination of resources / activities such as:

  – All relevant background information (client data, existing available information, etc.)

  – Secondary research (in Chinese and English), such as several different resources, from proprietary databases to access to associations or magazines, etc.

  – Primary research, e.g. access to external business network, interviews with experts and key insiders, possible visits to trade show or selected companies, etc.

  – Collective China knowledge/sector expertise/market research expertise with hundreds of research projects executed in and outside China

Format of this report

- The report is organized in such a way as to provide various level of details in different places – executive summary, overviews, and paragraphs in the body of the report, summaries, and appendices; bullet points are used throughout the entire report to make reading easier

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Information Sources

- Key sources of information for this report include:
  - All background information
  - Various secondary sources such as China Food and Packaging Machinery Industry Association
  - Interviews with industry insiders and experts
  - Ongoing analysis of all key facts and data collected
- In the report, sources are mentioned for charts, tables and key data; secondary sources include dozens of Chinese sources (news reports, magazines, publications, government statistics, etc.) as well as all companies' websites, press releases from various magazines, etc
- We mention "Sovereign Analysis" as a key reference; this refers to our elaboration and analysis of qualitative and quantitative data collected throughout the project
- Ongoing analysis and re-elaboration of all data collected is key to cross-check data and information and identify key trends and industry dynamics

Note for the report

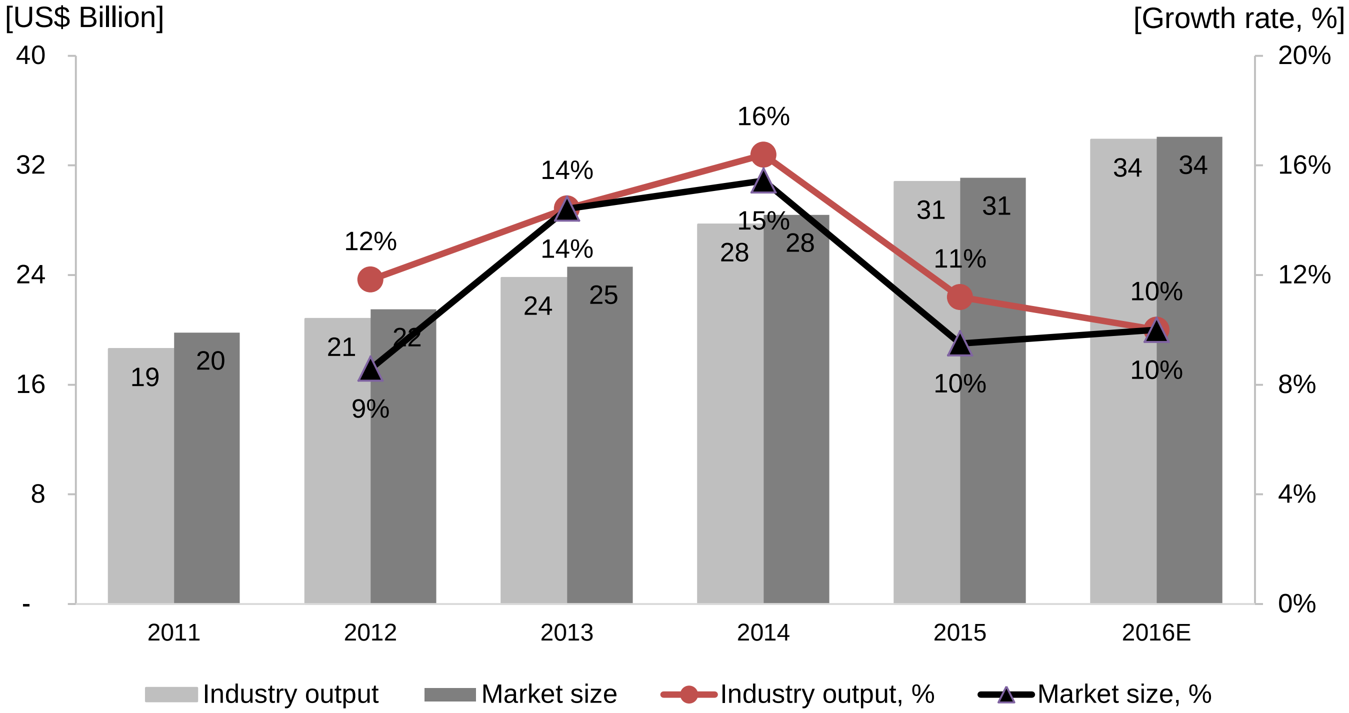
- This report is a high-level overview of the packaging machinery industry in China, for easy reading with essential information for Italian packaging machinery enterprises operating in or intend to enter the China market; it focuses on:
  - Providing general statistics and information with most up-to-date information
  - Capturing the latest key trends and market dynamics; and updating the latest import & export statistics and market position of Italy

MARKET OVERVIEW

The packaging machinery in this report covers key equipment for wrapping, bundling & palletizing, forming/filling/sealing, labeling & coding, etc.

- Packaging machinery industry is part of the overall packaging industry that also includes the packaging manufacturers (convertors) and the packers, i.e. enterprises providing packaging services to retail brand owners and retailers as well as the brand owners and retailers themselves.
- From 2011 to 2015, China's packaging machinery industrial output grew with a 13% CAGR[1], and the growth trend is expected to continue at a slower pace in the following years.
- As shown in the following chart, the total domestic industrial output reached US$ 31 billion (RMB 200 billion)[2] in 2015, an 11% increase over 2014; it is expected to grow to US$ 34 billion by end of 2016.
- Similarly, total market size[3] exceeded US$ 31 billion in 2015, with a CAGR of 12% over the past five years; demand is expected to exceed US$ 34 billion by end of 2016.

China Packaging Machinery Industry Output and Market Size, 2011-2015 and 2016 Estimate



Source: Sovereign analysis based on multiple sources

- During the 12th Five- Year Period (2011-2015), the packing machinery market experienced relatively stable growth, mainly driven by the upward economic trend, government stimulus policies (e.g. subsidies) and growing demand from downstream markets including food and beverage, pharmaceuticals, oil and household chemicals, cosmetics, tobacco, electronics, etc.

1 CAGR = Compound Annual Growth Rate
2 We use the exchange rate US$ 1 = 6.5 RMB, which is applicable throughout the report.
3 Market size = Domestic industrial output + import - export

- Chinese government's policies on encouraging domestic consumption, continuously rising household income, etc. have led to double-digit CAGR (10%-11%) in domestic consumption and production of food and beverage (especially soft drinks), oil and household chemicals, cosmetics, etc. over the same period.

- Consumer products such as F&B, pharmaceuticals, tobacco accounts for more than 80% of total packaging market demand; F&B downstream market is and will continue to pose the largest demand for packaging in China.

- With the expanding Chinese middle class, increasing disposable household income, rising concern about environmental friendliness, etc. the demand for more sophisticated packaging (e.g. upscale, eco-friendly, etc.) is expected to increase, which might benefit the packaging machinery sector.

- Creative packaging has become one of the major approaches for brand owners to differentiate themselves among the clutter; e.g. clean, elegant packaging portrays premium, high-end positioning while tamper-proof packaging and traceable codes guarantee authenticity and food safety.

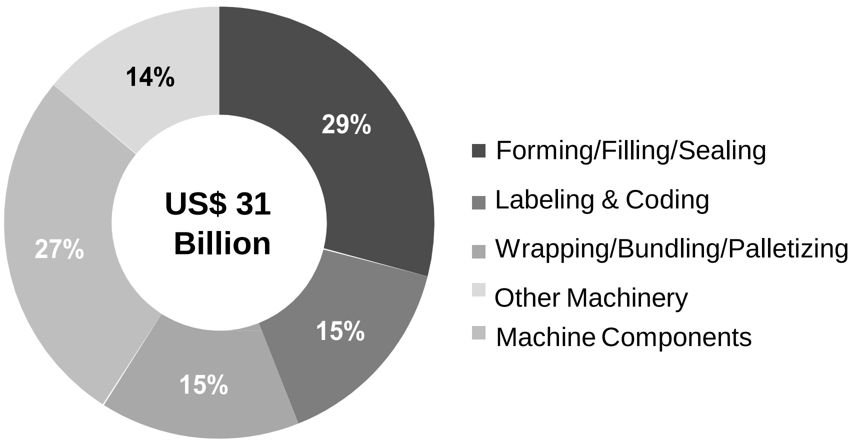
- In addition, booming e-commerce markets in China have stimulated various service industries including logistics and packaging, and further driven the domestic consumption of both primary[4] and secondary[5] packaging, such as cans, boxes, bottles, plastic films, corrugated cardboard boxes, pallets, etc.

- Tripartite effort by domestic, foreign enterprises and local government in establishing better distribution infrastructures drives demand for distribution packaging and transport packaging; these combined with the above factors result in the growth of associated packaging machinery sales.

- With ~30 major food safety incidents in China since 2003, food safety became a key concern for both Chinese consumers and their government; more stringent safety and hygiene standards for food, beverage and medical products are expected and this will drive the demand for more advanced packaging equipment.

- The following chart shows the breakdown of China packaging machinery by their main function:

Breakdown of China Packaging Machinery Market Value by Functions, 2015



Source: Sovereign analysis based on multiple sources

[4] Primary packaging: packaging that directly wraps or contains the corresponding products.
[5] Secondary packaging: packaging that in turn wraps or contains the primary packaging.

- Forming/filling/sealing machinery remains the most widely used product category in China, representing ~1/4 of the market; they are mainly designated for primary packaging functions, e.g. placing and sealing products in their respective bags, cartons, bottles and boxes.

- However, labeling and coding equipment has seen robust growth and is expected to remain the largest segment among other categories in the next few years.

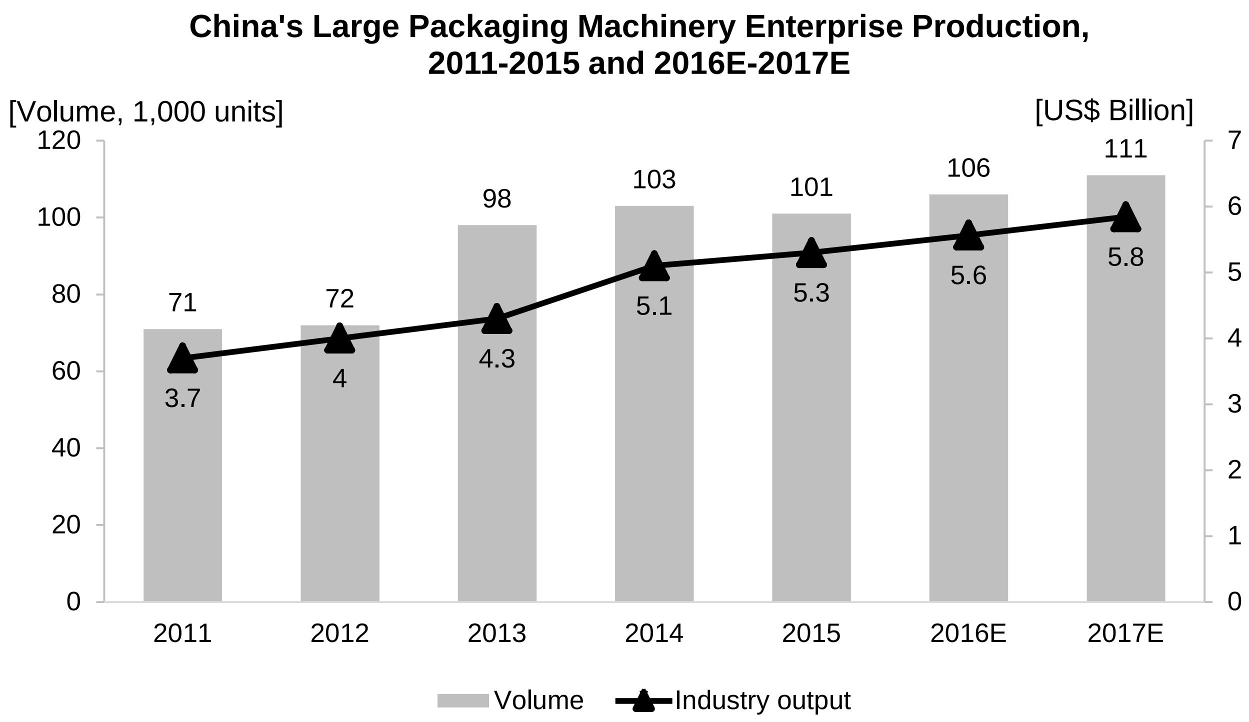
- This is driven by sustained growth in products with temporary labels, stricter regulations on food safety and hygiene as well as increasing focus on product labeling and traceability by consumers and regulatory authorities in China.

- The central government's 12th Five-Year (2011-2015) plan for economic growth has identified support for high-tech food processing (including packaging) technologies so as to improve the manufacturing standards of China's domestic F&B enterprises.

- Demand for wrapping/bundling/palletizing machinery will experience stronger growth in the next few years, mainly attributable to rapidly developing domestic distribution and logistics infrastructures as well as the increased penetration of e-commerce within China.

- Packaging machinery is a highly fragmented sector, filled with 7,000+ enterprises in China; 96% of these companies are small and medium sized enterprises with annual revenue below US$ 3 million (RMB 20 million), mainly concentrated in the low- to mid-end packaging machinery segment.

- Outputs of large sized packaging machinery enterprises (with annual revenue above US$ 3 million) reached US$ 5.3 billion (RMB 35 billion) and 101,000 units in 2015 (as shown in the following chart), increased at a CAGR of 9% from 2011 to 2015.



Source: Sovereign analysis based on multiple sources

- The industry will be expected to undergo faster pace of consolidation in the midterm, from 2020 onwards as some larger domestic enterprises move upscale with better technology causing players in the market to compete more intensely for diminishing domestic market share.

- China remains a net importer of packaging machinery; however, only 5% of the 2015 market size was attributable to imports from key exporting countries like *Germany*, *Italy, Japan* and *Sweden*.

- From 2011 to 2015, packaging machinery imports reached a peak at ~US$ 2.0 billion in 2011, followed by rebalancing period between 2012 to 2013 and went up to US$ 1.8 billion in 2014.

- However, the overall slowing economy have led to a 14% decrease in imports from 2014 to 2015 to US$ 1.5 billion; the decreasing trend is likely to continue in 2016 and imports are expected to drop to US$ 1.3 billion.

- Over the same period, exports kept the steady growth momentum (with a CAGR of 11%) and reached nearly US$ 1.2 billion in 2015.

- In 2015, *Italy* maintained #2 in packaging machinery imports, after *Germany*; however, imports from top five countries showed decrease between 2014 and 2015, among which *Italy* dropped by 35%, outpacing the other four countries.

- The trade data in first five months of 2016 has shown that there is likelihood of continued sharp decrease (~47%) in China's imports from *Italy*.

- Domestic enterprises (e.g. *Newmastar*, *Tech-Long*, *Sotech*, *Youngsun*, etc.) were able to invest in R&D of the more advanced technologies with funds raised through their IPOs[6] in the past few years and enter some high-end packaging equipment segments as well as provide customized packaging line solutions.

- However in the short run, it is still difficult for these large domestic enterprises to compete against foreign players like *Krones*, *Bosch*, *Coesia which* dominate the turnkey and high-end standalone machinery segments.

- Average lifespan for packaging machinery is between 5 and 10 years, though domestic customers have been resistant to equipment upgrades seeing that domestic equipment technology remains relatively stagnant over the past few years while imported machinery is exorbitant.

- Yet this situation will likely change during the 13th Five-Year period (2016-2020), considering Chinese central and local governments' continuous efforts in promoting green production, intelligent manufacture and advanced technologies, energy-saving and environmental protection; backward manufacturing facilities will be further reorganized or shut down.

- China has put forward development areas and industry targets for packaging machinery in the 13th Five-Year Plan for Food and Packaging Machinery Industry, which is expected to further drive the industry growth during the 13th Five-Year periods (2016-2020):

  - Targeted growth rate for packaging machinery is 12%-13%;

  - Continue encouraging domestic companies which are weak in technologies, creativity, after-sales services, brand building, and mainly provide medium to low-end homogeneous packaging machinery to increase investments in technology creation, which might pose a threat to imported brands;

  - Packaging machinery which meets the requirements of energy-saving and exhaust emission reduction will be highly recommended.

[6] IPOs = Initial public offerings

COMPETITIVE LANDSCAPE

- Domestic industrial output has grown at a CAGR of 13% to US$ 31 billion from 2011 to 2015; this is in tandem with the growth in demand for packaging and packaging machinery driven by many of China's consumer and industrial sectors growing with strong momentum.

- The packaging machinery supply underwent significant growth in the earlier days when China opened its economy to the world; number of domestic packaging machinery manufacturers increased from ~1,600 in 1999 to 7,000+ in 2015.

- Most of these domestic packaging machinery manufacturing enterprises are small, medium private enterprises, concentrated in key economic regions such as the *Pearl Delta* and *Yangtze River Economic Zones*.

- Over 70% of industrial output is contributed by Southeast coastal areas, including Guangdong, Zhejiang, Jiangsu, Shanghai, Fujian, etc.

- The sector remains generally fragmented and repetitive after the industry boom; most of the domestic packaging machinery products are close imitations of each other in terms of function and appearance due to technological and capital limitations.

- Individual regions and provinces are populated with many small domestic players that offer similar products, mainly competing on price; this creates a vicious cycle that limits profit margins and thus their capacity to invest rigorously in R&D and product differentiation.

- R&D expenditure undertaken by most of the domestic enterprises usually represent ~1% of turnover, as compared to the average 8-10% spent by their foreign counterparts.

- However, there are differences in design and quality between products made in different regions of China; packaging machinery sector in East and South China are typically more sophisticated and differentiated as compared to other parts of China.

- About 60 established domestic enterprises, such as *Guangzhou Tech-Long*, dominates the low- and mid-end segments, catering to more price sensitive domestic customers and key export markets; these enterprises account for approximately 1/10 of the total domestic packaging machinery production in China.

- These larger domestic enterprises (with annual revenue above US$ 15 million) began to move into more sophisticated high-tech segments in recent years as their capital base and corresponding R&D budgets increase but products of the remaining domestic players remain highly undifferentiated and overtly simplistic.

- R&D carried out by domestic enterprises diverge mainly into two main paths; some enterprises focused more on machine versatility that can cater to multiple packaging formats while others focused more towards machine efficiency to cater to high volume single format packaging.

- Overall R&D efforts by both domestic and foreign players are also increasingly centralized around the principle of lowering total costs of ownership (TCO), specifically focusing on higher energy consumption efficiency and packaging waste minimization.

- This is partly attributed to China government's vision towards a more sustainable economy as regulations on China industrial sectors (including packaging machinery sector) are reviewed and passed over the years.

- The *Clean Production Law (2002)* as well as the more recent *Circular Economy Law (2008)* imposes obligations on uses and manufacturing of packaging materials in China; the 13th Five-Year Plan has re-emphasized that products should be packaged in a reasonable manner to reduce overuse of packaging materials and generation of wastes.

- The overall domestic industry technology level is still stagnated, demand gap for more sophisticated, high-end packaging machinery market is mostly satisfied by foreign players and brands from countries like *Germany*, *Japan*, *Italy, Sweden*, and the *United States*.

- European players (including *Italy*) have well-established reputation in the high-end, high-tech segment, with the capability of providing turnkey solutions to customers that includes the customization, design, engineering and installation of packaging lines, beyond simply offering individual machines for sale.

- *Germany* maintains a leading position in terms of equipment design, manufacturing and technology, specializing in forming/filling/sealing, capsuling and labeling machine categories; German players are more aggressive and proactive in the China market, building strong manufacturing capabilities and extensive sales networks.

- Italian equipment is known for excellent performance, sophistication in design and generally being more reasonably priced than those faring from other Western regions.

- *Japanese* packaging machinery enterprises in China are typically small and medium sized enterprises that focus their production on smaller automated standalone equipment that are typically more space efficient, high in packaging precision and easy to install.

- *U.S.* packaging machinery products are usually known for their long industry heritage but they lag in sophistication as compared to key players from *Germany* and *Italy*.

- In recent years, there have been signs of consolidation in the domestic packaging machinery market albeit at a sluggish pace; the top 20 companies are estimated to hold about 10% market share.

- The 13th Five-Year (2016-2020) plan released by the central government specified prevention of over-packing and emphasized thrift and saving, energy saving, low carbon consumption, green and intelligent production, R&D in advanced equipment, etc. which applies to all manufacturing and equipment industries including packaging machinery.

- This should accelerate the pace of innovation within the domestic packaging machinery sector, increasing the overall competitiveness of domestic packaging machinery as compared to foreign brands and imports; competition is expected to intensify significantly over the next 5 years.

- Intense competition will result in stronger consolidation momentum, as medium-sized players will be gradually assimilated by larger domestic and foreign players in moves to defend market share position and to capitalize on the next wave of consumption growth due to urbanization and rising middle class households in China.

Key Domestic & Foreign Players of Packaging Machinery

- Many well-known international packaging machinery manufacturers have already established a solid presence in China, including *Krones (Germany)*, *Bosch (Germany)*, *KHS (Germany)*, *Coesia Group (Italy)* and *Tetra Pak (Sweden)*.

- These large foreign players have entered into China mainly through WFOE [7], JV [8], RO [9] or agents/distributors, and have established significant brand awareness in the market.

- There are many other small to medium-sized foreign packaging machinery manufacturers in the China market; many of the players from *Japan* and *Taiwan* are small and medium-sized enterprises.

- Most of the more established international players such as *Krones* and *Coesia* have the capability to provide turn-key, customized packaging line solutions to customers, incorporating a series of their products as key modules in design & installation according to specific customer's production needs.

- Large domestic packaging machinery players have recently chosen to raise funds through IPO[10] to further support their technology innovation and R&D investment, e.g. *Newamstar*, *Tech-Long*, *Sotech*, *Youngsun*, etc.

- These large packaging machinery companies have gradually shifted towards high-end market but it is expected to take substantial amount of time before domestic quality and sophistication can catch up to that of the foreign counterparts.

- Many of the smaller domestic players focus on a single downstream industry or single type of packaging machinery; brand awareness is largely constrained within specific regions due to low level of technical and physical differentiation between products of individual companies.

[7] WFOE = Wholly foreign owned enterprise
[8] JV = Joint venture
[9] RO = Representative office
[10] IPO = Initial public offering

- The table provides a list of key foreign packaging equipment manufacturers in China

Table: Key Foreign Packaging Machinery Manufacturers in China

Company Name	Main products	Legal Entity	Note
Forming/Filling/Sealing Machinery			
Krones AG	Turnkey, bespoke production and packaging solutions to clients; mainly focused on the distribution of filling/sealing technologies with efficiency up to 100,000 bottles/hour	WFOE (*Germany*)	• Set up its Taicang plant in 2005; more than 30 years in China • Sold more than 500 contiform bloc systems[11] into China • Beverages (incl. alcoholic) accounts for more than 90% of its 2012 sales; food, chemicals, pharmaceutical and cosmetics account for the rest
Bosch Packaging	Packaging machinery suitable for pharmaceutical, confectionary & cosmetics and food & non-food products as well as consulting, accreditation services	WFOE (*Germany*)	• Established in Hangzhou in 2001 • ~80% of its China customers are domestic enterprises • China sales CAGR exceeded 40% over 2008-2013; invested ~US$ 11 billion over 2010-2012 in China expansion projects
KHS	Turnkey processing and packaging design & setup as well as standalone machinery for filling, labeling, palletizing, etc.	WFOE (*Germany*)	• Subsidiary of *Salzgitter AG* • 2013 revenue at EUR 1.02 billion, ~22% attributed to Asia Pacific (incl. China) • Established stronger presence in China in 2006 by acquiring 70% of China domestic enterprise *GLM2 (Shantou)* with product focus on filling machinery for the beer industry; divested its interest in 2012 • Currently, selling through its *Corpoplast* WFOE under its parent, *Salzgitter*
Multivac	Sophisticated packaging solutions that include vacuum packaging machines, tray sealer, thermoforms machinery	WFOE (*Germany*)	• Localized its equipment production in Shanghai, China • Key clients mainly include large food processing enterprises such as *U.S. Hormel Food*, *Henan Shuanghui Group*, *Yurun Group*, *Hubei Zhouheiya* • Products also applicable to medical, industrial products and other non-food consumable products
Webomatic	Known for its intelligent vacuum packaging technology but also manufactures tray sealers and thermoforms machinery	Import (*Germany*)	• Works with international agent *Wilber Engineering Ltd (Hong Kong)* in accessing the China domestic market • Products apply to both food and non-food sectors (e.g. medical, cosmetics, electronic and household products)
ROVEMA	Wide range of services to clients, incl. sales of standalone machines to turnkey system set up	Import (*Germany*)	• Products typically imported into China through its partner *Kelitai (Beijing)* • Mainly focuses on food and some non-food or industrial products

Table to be continued…

[11] Cutting edge line system that combined production and the filling of PET (polyethylene terephthalate) containers, mainly used in the packaging

…Table continued

Company Name	Main products	Legal Entity	Note
Hassia	Forming/filling/sealing and filling/sealing machinery for multiple packaging formats	Import (*Germany*)	• Known for its sophisticated aseptic packaging technology – steam sterilization • Its forming/filling/sealing and filling/sealing machinery widely adopted by China dairy enterprises, e.g. *Yili, Mengniu, Guangming* • *Want Want*, one of the key dairy players ordered 3 dairy processing & packaging machinery in 2012, the biggest single order from China
Coesia Group	Comprehensive filling and packaging equipment through its subsidiary companies, e.g. *Norden, Kalix, Citus, ADMV, GDM*	WFOE (*Italy*)	• Established in Suzhou in 2005 • Each of its subsidiaries focused on a specific type of technology and/or industry; covers extensive range of industries and sectors • E.g. *R.A. Jones* produces packaging machinery for food and consumer goods while *SASIB* focuses on packing lines for tobacco sector • Its *SACMO* subsidiary provides packaging line design and consultancy as well as installation and customer training
AVE Industries	Capability to set up complete bottling and packaging line; also provides single machines required at numerous stages of production, e.g. bottling, filling, labeling and palletizing	Import (*Italy*)	• Key customers in China includes large sized food and non-food corporations, e.g. *Wahaha, Pepsi/Gatorade, Nestec, Bacardi Beverage, Shanghai Seagram, Wu Liang Ye, Zeneca Nantong Agrochemicals*
Newlong	Packaging systems, e.g. automatic bagging system, liquid filling machinery	WFOE (*Japan*)	• Held ~80% market share in the Japanese automatic bagging machinery market • Products applicable to most downstream market, with some level of customization provided to the specific needs of its customers • Had a factory and an office in Shanghai
Nishihara	Mainly focused on vacuum packaging machinery, filling/sealing machinery for the China food sector	RO (*Japan*)	• Established 2 ROs in Shanghai and Beijing to drive sales and manage its aftersales services in China • Product design is centralized around space efficient concepts
Tetra Pak	F&B processing and packaging machinery, specifically forming/filling/sealing equipment and packaging lines	WFOE (*Sweden*)	• Entered China as early as 1972; established office in Shanghai • Established innovation center in China to facilitate localized R&D efforts • Invested RMB 20 million in "School Milk of China" assistance programme for less privileged children in China

Table to be continued…

…Table continued

Company Name	Main products	Legal Entity	Note
Elopak	Fresh and aseptic filling machinery for juice, dairy products and other liquid food products	WFOE (*Norway*)	• Established RO in Beijing (2000) and WFOE in Suzhou Industrial Park (2004) • Production facilities in China is a joint venture with Japanese *Nippon Paper-Pak*, focusing on supplying carton products to the Chinese domestic markets; capacity estimated at 700 million per year
Sidel	Line design and setup, centralized around the standalone beverage (incl. alcoholic) packaging machinery that it is offering	WFOE (*France*)	• In China for over 20 years; it was acquired by *Tetra Pak (Sweden)* in 2003 • Production and packaging equipment focuses on PET materials and PET packaging line solutions • Established 40,000 sqm manufacturing plants in 2007; has presence in Shanghai (East China) and Guangzhou (South China)
Wrapping/Bundling/Palletizing Machinery			
MarquipWardUnited (MWU)	Corrugating, finishing sheeting and sheet packaging equipment; mainly driven towards secondary packaging markets	WFOE (*U.S.*)	• *MWU* is part of the *Barry-Wehmiller Papersystems Co.*; it was acquired in 2000 • Established parts & service center in Shanghai to assist its customers in China • 8 equipment manufacturing plants dispersed in *U.S., Hungary, Italy and Germany*
BHS	Mainly focuses on corrugators	WFOE (*Germany*)	• 2012 turnover exceeded EUR 300 million • Established presence in Shanghai since 2003 with ~27,000sqm production facility driven towards production of corrugators, splicers, etc. • Customers incl. *Licheng Packaging, Tri-Wall Trading (Shanghai), Shanghai Changchen, Quanzhou Jianfeng Packaging*, OEM transport packaging solution providers
EMBA	Corrugating machinery, including its flexo folder gluers, rotary die cutters and stackers	WFOE (*Sweden*)	• It is one of the subsidiary under the Swedish *Berg Group*; *Berg* has an annual turnover of ~EUR 86 million • Has a sales & after-sales service office in Shanghai • Product designs are modular and flexible with the option of bundling/palletizing attachment interface

Table to be continued…

…Table continued

Company Name	Main products	Legal Entity	Note
Labeling & Coding Machinery			
Videojet	Multiple series of high tech labeling & coding machinery, e.g. continuous inkjet, laser marking, case coding & labeling, thermal inkjet machinery	WFOE (*U.S.*)	• 2 key high end brands of labeling & coding machinery – *Videojet* and *Marsh* • Also distributes lower end U.K. brands like *Willett* and *Linx* acquired in its recent years • Set up production facility in Guangzhou, China to satisfy Asia regional demand for its products; established sales network in more than 10 key cities in China
Hitachi	Continuous inkjet labeling & coding machinery	Import (*Japan*)	• Production centralized in German subsidiaries • Product built around the concept of efficiency, quality and reliability • Can be integrated into overall production and processing lines
Markem-Imaje	Coding machinery applicable for primary and secondary packaging, i.e. product wrappings, cans, bottles to corrugated cardboard boxes and pallets	WFOE (*U.S.*)	• One of the 30 subsidiaries under Dover Corporation • Established long-term partnership agreement with China dairy enterprise, *Mengniu* • Provides customized solutions to customers with regards to traceability of products, brand/IP protection and cost reduction
Domino	Labeling & coding machinery with inkjet, laser technology	WFOE (*U.K.*)	• Established presence in Shanghai (China) since 1995; it is currently the largest overseas manufacturing and sales hub • Subsequently established more than 30 subsidiaries in key regions in China • Many of its products are enhanced with automation technology that can be integrated into advanced processing and packaging production lines • Key downstream markets incl. beverages, daily consumables & personal care, food, pharmaceutical and tobacco

Source: Sovereign analysis based on multiple sources

- As seen from the table above, most of the high-end segments in the forming/filling/sealing, wrapping/bundling/palletizing and labeling & coding machinery categories are dominated by well-known foreign brands and corporations.

- Majority of the domestic demand for high-end, high-tech packaging machinery supplied by these players came from large sized, multinational F&B and industrial enterprises such as *Coca Cola, Wahaha, Tsingtao Beer Group, Haier Electronics, P&G, China Salt Group*, etc.

- Larger domestic players are also active in supplying to these large sized customers but the rest of the smaller domestic players are mostly unable to satisfy stringent international procurement criteria as well as scale required of their products.

- *Taiwan* packaging machinery enterprises such as *Jaw Feng Machinery*, *Promarks Vac* are mostly small and medium enterprises that employs import-export strategies in accessing the Chinese domestic markets; they typically focus on a few key packaging technologies with substantial demand in China.

- The table provides a list of key domestic packaging equipment manufacturers in China

Table: Key Domestic Packaging Machinery Manufacturers in China

Company Name	Main products	Legal Entity	Note
Nanjing Light Industrial Machinery Group	Bottling (up to 50,000 units/h), washing, sterilization, conveyer equipment	SOE	• Mainly focused on technologies applicable to beer, beverages and other liquid foods • A subsidiary of China National United Equipment Group International Engineering Corp (CNBM) • Customer portfolio mainly includes large domestic beer manufacturing enterprises such as *Tsingtao Beer*, *Zhujiang Beer*, *Huiquan Beer* • Foreign multinational customers: *Coca Cola*¸ *Pepsi Cola*, *Budweiser*, *Asahi*
Newamstar	Liquid foods and beverage packaging machinery and solutions; also manufactures secondary packaging system such as palletizing system	Private (Publicly Listed)	• Domestic leader in beverage packaging machinery innovation, e.g. created a 51,000 bottles/h ultra-high speed blowing-filling-capping combiblock system • Products exported to more than 70 countries • Key customers include multinational F&B corporations, e.g. *Coca Cola, Pepsi, Danone, Nestle, Wahaha, Master Kong, Suntory, Dali, C'estbon*
Tech-Long	Processing, filling and packaging machinery and solutions for liquid F&B products and household chemicals	Private (Publicly Listed)	• Established in 1998 • Sales hub established in Beijing, Shanghai, Sichuan and Guangzhou • Among top 10 brands in China for filling machinery
Zhongshan TO-U Packaging Machinery	A series of packaging line equipment, with specific focus on filling/closing/sealing equipment (up to 3,600 bags/h)	Private	• Established in 2002; located at Shandong Province national technology park • Exports to more than 30 countries, e.g. *U.S., Canada, Italy, Spain,* etc. • R&D effort moving towards automation, with a significant proportion of products being manufactured with automation technology
Sotech Smarter Equipment	Printing machine, laminating machines, coating machines, sheeting machines, coding and labeling machine	Private (Publicly Listed)	• Established in 1998, was previously part of the publicly listed Beiren Group • Setup production facility and sales network in Qingdao, Shandong Province • Clients include *China Unicom (Telecommunication), Shuxin Agriculture, China United Airlines, Foxconn (Electronics), Yanjing Beer*
Hangzhou Youngsun Intelligent Equipment	Able to offer turnkey services, labeling machine, stacker, strapper, filling/closing/sealing equipment, vacuum packing, palletizer	Private (Publicly Listed)	• 4 product series, 27 types applicable to ~250 product formats/specifications • Participated in the drafting of key packaging machinery national standards • Key clients include: *Dell, Haier, Lenovo*

Source: Sovereign analysis based on multiple sources

SNAPSHOT OF KEY CUSTOMERS AND APPLICATION SEGMENTS

Overview of Key Customers

- Packaging machinery sector accounts for a small proportion (~13%) of the entire China packaging industry due to the products' nature as a capital investment product; purchases by key customers are irregular as significant amount of considerations will need to be put in beforehand.

- Thus, packaging machinery supply is highly constrained by the performance of downstream markets as well as the individual customers' ease of access to capital and credits for such big-ticket investments; investments may require up to millions of dollars per unit/system.

- Packaging machinery has a wide variety of applications, suitable for downstream markets such as F&B, pharmaceutical, household chemicals, personal care (including cosmetics), hardware and electronics, agriculture, industrial chemicals, cement and oil & gas, etc.

- However, the largest market for packaging machinery still remain and will continue to be the F&B packaging sector; consumption for prepackaged F&B products are expected to increase quickly as number of urban middle class households increase over the next decade.

- Furthermore, the F&B downstream markets are generally stable, non-cyclical and growing with a strong momentum, thus they are becoming increasingly attractive to domestic and foreign players over the years.

- Purchases made by these households are increasingly shifting towards premium, branded products that are convenient and well-packaged; this is generally driven by overall improvements in consumer sophistication in key cities and rising focus on the traceability, food safety aspects of consumption.

- Correspondingly, packaging adopted by product brand owners and retailers are also responding to these shift in consumer preferences; product packaging becomes more sophisticated in both function and appearance.

- For example, carbonated beverages, best represented by products under the *Coca Cola* and *Pepsi Cola* umbrella of brands represent the largest percentage of all beverage types sold in China.

- Multinational corporations like *Coca Cola* have been consistently raising the awareness of the sustainability of their product packaging as part of their effort to defend their brand and market share positions in China.

- Main customers include OEM packaging service providers, large integrated logistics companies, large F&B enterprises like *Wahaha*, *Yili*, household product manufacturers like *P&G*, *Unilever* as well as players in the industrial sector, such as cement manufacturing, agricultural chemical companies, etc.

- Although large retailers such as *Wal Mart (China), RT-Mart* are typically not direct customers of packaging machinery enterprises, they are exerting significant indirect pressure on packaging machinery manufacturers as they reflect Chinese consumers' demand for higher quality packaging.

- However, large retailers with significant control over their private label/own-brand products production will also be customers with the need for high quality packaging machinery; these retailers usually developed integrated supply chain and logistic networks that involves the use of primary and secondary packaging in the process.

Overview of Key Application Segments

- Despite slowing economic growth in China, the Central government has indicated in the past few years that the economy will be transitioning into a consumption driven one; a successful transition will ensure the continued development and growth of its various consumer and industrial sectors.
- Complemented by positive demographic shifts like urbanization, consumption growth will have the potential of pushing the packaging machinery sector to a greater height, in terms of both market value and overall level of sophistication and innovation.
- However, driven by the environmental friendliness emphasized in the 13th FYP, there will likely be a trend of green and simple packaging in various segments in the coming years.
- The following table shows the key customer segments of packaging machinery and key applications

Table: Key Customer Segments of Packaging Machinery and Key Applications

Key customer industries	Description
Food & Beverage	• Largest downstream market for packaging machinery in China • China's F&B market posed a CAGR of 15% over 2009-2015 and total production have reached US$ 1.74 trillion in 2015 • Domestic household F&B expenditure grew at a CAGR of 7% over 2010-2015 • Packaging machinery plays a large part in the Chinese F&B supply chain, e.g. bottling machinery is an integral part to the domestic beverage sector • Aseptic filling machinery is also a fast growing segment, dedicated to the fast growing dairy product sector in China • Large number of domestic and foreign players competing in this segment due to market attractiveness • End users include: *Wahaha Group, Guangdong Robust Group, Jianlibao Beverage Company, Coca Cola (China), Pepsi Cola, Shanghai Bright Dairy*
Pharmaceutical & Medical Devices	• With growing standard of living in China, Chinese consumers are becoming more health conscious, focusing more on personal wellness and long term health impact of everyday activities • Consumer health market in China is expected to increase at a CAGR of 12% to RMB 400 billion (US$ 62 billion) by 2020 • Pace of growth in demand for pharmaceutical products and disposable medical devices is also expected to accelerate due to China's growing elderly population and improving overall level of technology in the medical sector • This is identified as one of the key demand driver for advanced packaging machinery as packaging medical and pharmaceutical products need to be conducted in a sterilized and controlled environment with high degree of precision • However, current domestic machinery suppliers are largely unable to manufacture products that can fit the minimum criteria • End users include: *Xi'An Janssen, Amway (China), CR Sanjiu Medical & Pharmaceutical, 999 Enterprises Group*

Table to be continued…

…Table continued

Key customer industries	Description
Household Chemicals	• With the improving life standards of affluent middle class, concerns about air pollution, personal hygiene and sanitary increase • Household chemical products such as detergents, washing powder, air care have become increasingly popular among urban middle income households • Rising penetration of modern trade retail channels such as hypermarkets and supermarkets further accelerate the pace of growth in this segment • Packaging in this sector is becoming more unique and innovative as intense brand competition drives demand for diverse packaging in a move to differentiate from the competitions • This sector is expected to grow at a CAGR of ~8% over 2013-2018 to reach RMB 128 billion by 2018 • End users include: *Guangzhou Liby, Nice Group, Unilever, P&G*
Personal Care & Cosmetics	• Growing disposable income complemented by increasing awareness of personal appearance buoyed the personal care & cosmetics market in China • Product categories like deodorants, fragrances, skincare, sun care products all grew at unprecedented rates • The industry grew at double-digit 11% CAGR over 2008-2013 and is expected to continue to grow with healthy overall 8.0% CAGR over 2013-2018 despite some of the sub-sectors maturing due to intensifying global competition • Packaging customization is one of the most important marketing strategies adopted by key players in this industry; packaging used in such products need to accurately project the specific unique value propositions that each of these products is about • E.g. Ralph Lauren Romance is packaged in a pink rectangle box to represent the purity and timelessness of first love • End users include: *P&G, L'Oreal China, Unilever, Hangzhou Mary Kay, Johnson & Johnson, Colgate*
Tobacco	• China is the world's largest tobacco manufacturer and consumer • There are about 100 major players in the China tobacco market by the end of 2015 • However, the industry will see revived growth due to increasing disposable income and is expected to be growing at a CAGR of 17% over 2013-2018 and reach RMB 2.9 trillion (US$ 446 billion) by 2018 • Carton-based forming/filling/sealing machinery growth will be partly driven by the growth in demand for tobacco products • End users include: *Yuxi Hongta, China Tobacco Hunan Industry Corp, British American Tobacco*
Others	• These markets on its own account for a smaller proportion than each of the abovementioned sectors but together they account for ~17% of the total packaging market value • Others include: electrical & electronics equipment, textiles and apparels, agricultural chemicals, cements, paints and coatings, commodities, etc. • End users include: *China Salt General Corp, Haier (electronics)*

Source: Sovereign analysis based multiple sources

IMPORT AND EXPORT ANALYSIS

This section analyzes the imports and exports of china's packaging machinery industry, with a focus on Italy's trade position. The import export analysis for packaging machinery is based on the following list of HS codes used to define the industry:

Categorization of Wire Machinery HS Codes

HS Code	Description of Products
Bottling/Canning Equipment & Parts	
8422.3010	Bottling/Canning Machinery for Beverage or Liquid-based Foods
8422.9020	Parts of Bottling/Canning Machinery for Liquid-based Foods
Other Primary & Secondary Packaging Equipment & Parts	
8422.3030	Other Packaging Equipment
8422.3090	Filling/Closing/Sealing Machinery (for Bottle/Can/Box)
8422.4000	Packing or Wrapping Machinery (including thermal sealing equipment)
8422.9090	Parts of Other Machinery under HS Code 8422
Cement Packing Machinery	
8422.3020	Cement Packing Equipment
8422.3021	Automated Cement Packing Equipment
9422.3029	Other Cement Packing Equipment

Source: Sovereign-China Analysis on multiple sources including China Customs and World Trade Atlas

Overview

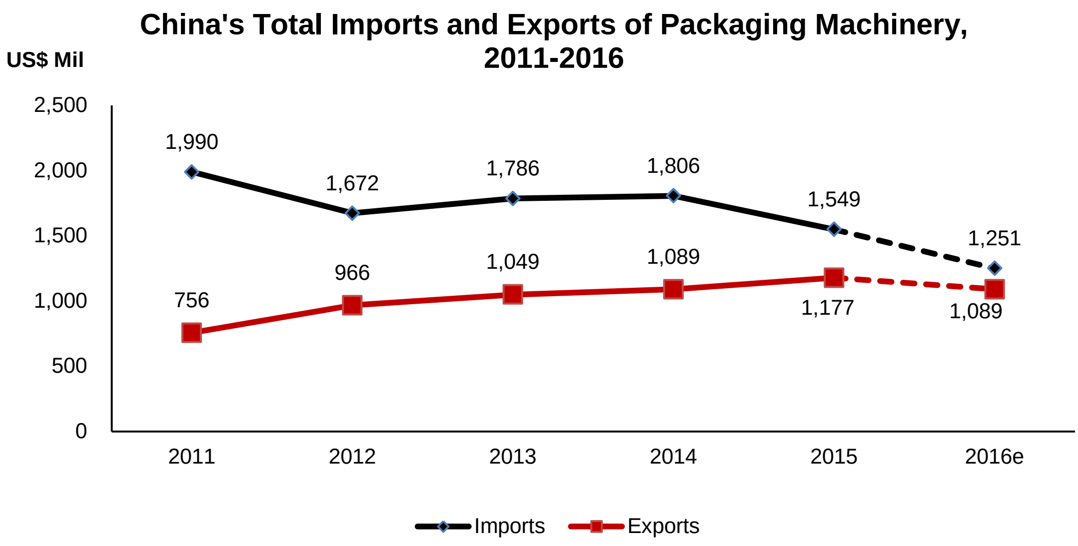
- In 2015, China's total imports of packaging machinery and machinery components exceeded US$ 1.5 billion and exports were nearly US$ 1.2 billion.

- From 2011 to 2015, the imports declined at -6% CAGR from nearly US$ 2 billion to US$ 1.55 billion; decline in the market is mainly attributed to a slowdown in the overall economy and a switch to domestically produced packaging machinery.

- As the Chinese economy continues to slow and the quality of domestically produced machinery increases, imports of packaging machinery are expected to continue to decline.

- From January to May 2016, imports and exports reached US$ 521 million and US$ 454 million respectively; the total imports and exports of the year is estimated to be US$ 1.25 billion and US$ 1.1 billion respectively.

- The following chart shows the overall imports and exports from 2011 to 2016:



Note: 2011-2015 are full year data; 2016 is estimated based on actual data for January-May 2016
Source: Sovereign Analysis on China Customs and World Trade Atlas

- Italy ranked **#2** in overall packaging machinery imports in 2015; Germany is ranked #1 and Japan is ranked #3.

Imports of Packaging Machinery into China

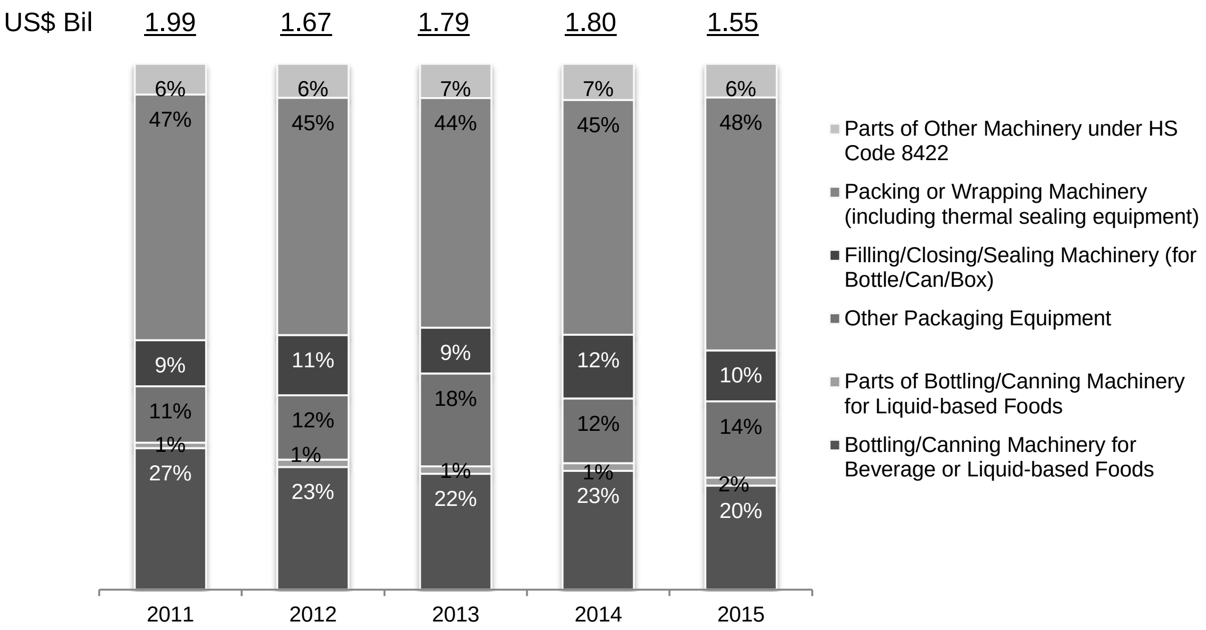
- In 2015, imports of packaging machinery reached US$ 1.5 billion in total, the top categories in 2015 include:

– *Packing or wrapping machinery (HS Code 8422-4000)*	US$ 744 Million
– *Beverage bottling/canning machinery (HS Code 8422-3010)*	US$ 305 Million
– *Filling/closing/sealing machinery (HS Code 8422-3090)*	US$ 151 Million
– *Other packaging machinery (HS Code 8422-3030)*	US$ 224 Million

- However, all of the categories are experiencing a sharp decline in imports in 2016.

- The chart below illustrates the growth in imports from 2011-2015 and a breakdown of each category in terms of percent of the total imports:

Breakdown of Imports to China, 2011-2015



(*)Note: There was insignificant quantity (<1% proportion of total) of cement packing machinery imported into China; the number of cement packing machinery imports experienced a decreasing trend since 2009 and thus was excluded from analysis.
Source: Sovereign Analysis on China Customs and World Trade Atlas

- The top 3 exports to China include Germany, Italy and Japan; the table below shows the top 10 exporting countries of Packaging Machinery to China from 2013-2015:

Table: China's Packaging Machinery Import by Country during 2011-2013

Rank (2015)	Country	Import Value (US$ M)			%Share vs. Total			% Change 14/15
		2013	2014	2015	2013	2014	2015	
-	**World**	**1,785**	**1,806**	**1,549**	**100%**	**100%**	**100%**	**-14%**
1	Germany	529	518	440	30%	29%	28%	-15%
2	Italy	392	453	295	22%	25%	19%	-35%
3	Japan	260	204	180	15%	11%	12%	-12%
4	Sweden	116	131	130	6%	7%	8%	-1%
5	Taiwan	124	110	108	7%	6%	7%	-2%
6	South Korea	85	79	81	5%	4%	5%	2%
7	Malaysia	26	60	77	1%	3%	5%	17%
8	United States	57	54	60	3%	3%	4%	11%
9	Switzerland	32	37	50	2%	2%	3%	35%
10	Spain	10	13	16	1%	1%	1%	23%

Source: Sovereign analysis on World Trade Atlas and China Customs

- In 2015, *Italy* remained #2 in total packaging machinery imports, with an import value of US$ 295 million (19% of the total imports).

- The major competing countries for packaging machinery imports are *Germany* (28%), *Japan* (12%), *Sweden* (8%), and *Taiwan* (7%); with Italy, these countries account for the top five countries in terms of import market share value.

- Imports from the top 5 countries accounts for more than 74% of the total packaging machinery imports in 2015 but experienced a sharp decline over previous years; the decline is expected to continue.

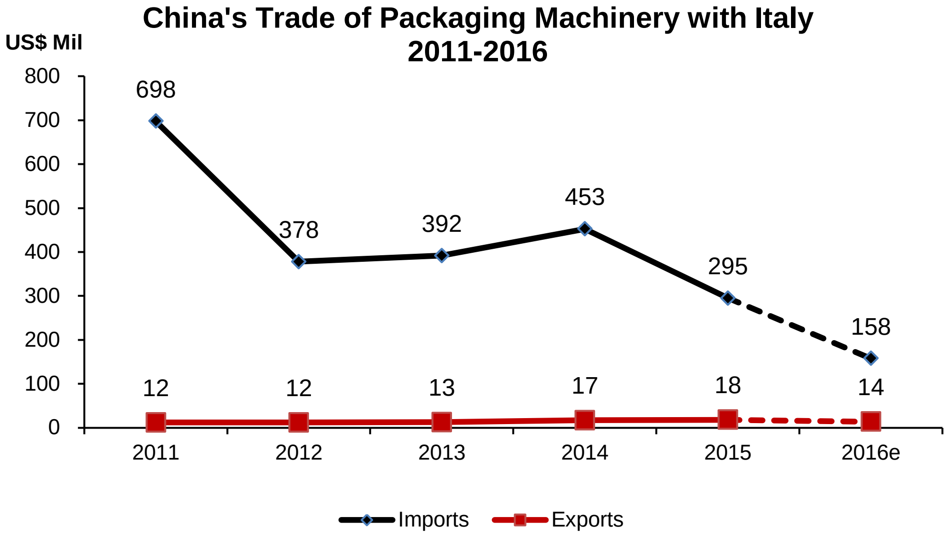
Italy's position

- China's imports from *Italy* have declined sharply from 2014 to 2015, dropping by 35%, which is double the drop in overall China imports and outpaces the drop in the other five top countries from which China imports.

- Based on the trade data in 2016, which covers January through May, imports to China from Italy have reached only US$ 66 million, and are not expected to exceed US$ 158 million by the end of the year; this is a 47% drop over 2015.

- Italy still maintains the number 2 ranking at the end of 2015 for countries from which China imports packaging machinery from; however if the trend continues they may drop to the number 3 ranking by the end of 2016.

- The following chart shows the imports and exports of packaging machinery products with *Italy* from 2011-2016 Est.

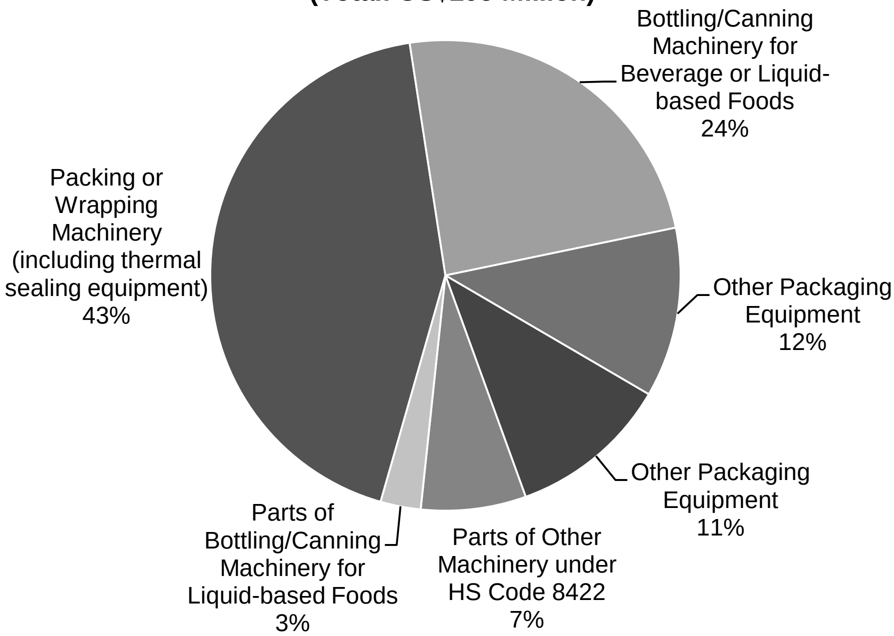


Note: 2016 full year data is forecast based on actual imports/exports between January-May 2016
Source: Sovereign Analysis on China Customs and World Trade Atlas

- *Packaging or Wrapping Machinery*, *and Beverage Bottling/Canning Machinery* are the largest import categories in 2015, accounting for 43% and 24% of imports from *Italy* respectively.

- The chart below provides a breakdown of packaging machinery imports from *Italy* to China in 2015:

Packaging Machinery Imports from Italy by HS Code, 2015
(Total: US$295 Million)



Source: Sovereign-China Analysis on multiple sources including China Customs and World Trade Atlas

- The table below shows *Italy's* market position and major competitors for segments of packaging machinery in 2015.

Table: Italy's Market Position of Packaging Machinery in 2015

Product Category	HS Code	Italy's Position	Value [US$ Mil]	% Share	Major Competitors		
					Country	% Share	%Change 14/15
Bottling/Canning Equipment & Parts							
Bottling/Canning Machinery for Beverage or Liquid-based Food	8422.3010	#3	$71	23%	Sweden Germany Japan	32% 26% 10%	23% 7% 25%
Parts of Bottling/Canning Machinery for Beverage or Liquid-based Foods	8422.9020	#1	$8	33%	Sweden Germany Japan	24% 18% 7%	7% -23% 50%
Other Primary & Secondary Packaging Equipment & Parts							
Other Packaging Equipment	8422.3030	#2	$32	15%	Germany Japan Switzerland	28% 13% 9%	-24% 7% 382%
Filling/Closing/Sealing Machinery (for Bottle/Can/Box)	8422.3090	#2	$34	25%	Germany Taiwan United States	35% 12% 7%	-44% 9% 34%
Packing or Wrapping Machinery (including thermal sealing equipment)	8422.4000	#2	$127	17%	Germany Japan Malaysia	30% 13% 9%	-12% -17% 26%
Parts of Other Machinery under HS Code 8422	8422.9090	#2	$21	25%	Germany Japan United States	31% 18% 5%	-22% -7% -26%
Total imports of packaging machinery from Italy to China		#2	$295	19%	Germany Japan Sweden	28% 12% 8%	-15% -12% -1%

(*) Note: Total import does not tally with sum of all import categories due to rounding. Cement packaging machinery product category was analyzed but not included in the table above because the total import value was consistently negligible over the last 5 years.
Source: Sovereign analysis on World Trade Atlas and China Customs

- Overall, *Italy* ranked #2 in 2015 and its main competitors are *Germany*, *Japan* and *Sweden*.
- *Italy* is relatively strong in the export of all packaging machinery import categories analyzed in this report, and is in the top 3 countries exporting to China.

KEY MARKET DYNAMICS AND TRENDS

International players continue to dominate in major high-end machinery categories

- Domestic packaging machinery players lag significantly behind their foreign counterparts in the China market in terms of technology innovation, machine specifications, functionalities and design.
- *German, Italian, Japanese, U.S. and Swedish* players shared the majority of domestic demand for high-end packaging machinery due to a lack of viable alternatives from the domestic players.
- A few larger domestic players with sufficient capital and revenue base, e.g. *Newmastar*, *Sotech*, *Youngsun*, and *Tech-Long* are moving towards higher end segments and increase R&D investments; however, it still takes time for them to catch up with international counterparts.
- Most smaller domestic players are still embroiled in intense price competition in the lower end segments, reducing industry wide profit margins and thus limiting the overall growth potential in technology level throughout the industry.
- This is expected to continue until industry wide technology level of products offered by domestic enterprises reaches the international standards required by major downstream customers.

Pace of consolidation expected to accelerate

- Number of domestic players in the China market (7,000+) has reached a level that may be unsustainable for small and medium players in the market; price competition seems to be intensifying among regional players in the lower end segments due to low level of product differentiation.
- As downstream packaging industry mature and demand for customized, high-end packaging increases, packaging machinery products offered by many of these players will become redundant and insufficient; this will further exacerbate the price cutting in low end segments.
- Many may become insolvent while others will be assimilated by larger domestic and foreign players in moves to acquire production facilities, technologies, technicians and market share.
- Consolidation is expected to be most evident from 2020 onwards when the technological gap between what domestic players can supply and what the domestic market requires is most prominent.

High efficiency and environmental friendliness are the new innovation focus

- The Central government's 13th FYP has specified the requirements for packaging and packaging machinery industries – to prevent over-packing and encourage green production, energy-saving, high efficiency, and improve automation in machinery production.
- The 13th FYP for Food and Packaging Machinery further elaborates that companies should minimize generation of wastes, hazardous pollutants, and impacts on environment and food safety; establish intelligent platforms based on internet, cloud computing, advanced manufacturing, etc. to improve efficiency.
- These policies will likely drive the demand for packaging machinery focusing on high efficiency and environment friendliness over the coming years.

CONSIDERATIONS FOR ITALIAN COMPANIES

The following section introduces potential opportunities and barriers, and possible market entry options for Italian players in packaging machinery industry

Potential Opportunities for Italian Companies

Advanced technology and environment-friendly equipment are encouraged

- During the 13th (2016-2020) Five-Year Periods, the Chinese Central and local governments have and will continue encouraging the investment on advanced technology and environment-friendly equipment.

- This shall drive the cooperation between large domestic wire market players and international technology providers, and open the market for advanced technology and environment-friendly and sustainable equipment.

Strong demand potential for high-end packaging machinery

- Increasing Chinese consumer sophistications drive overall demand for sophisticated, innovative designs in packaging across most downstream markets, e.g. F&B, cosmetics, etc.

- Major retailers like *Walmart* in China are also exerting significant pressure on the brand owners and indirectly the packaging machinery players, increasing their participation in designs and specifications of the packaging used in the products sold at their retail outlets to advocate green packaging and supply chain.

- This drives demand for high-end, modular packaging machinery that can be retrofitted at different phases of production to accommodate the different packaging formats required by different retailers.

Italian packaging machinery established firm reputation in the high-end segment

- Italian machinery is known in China for their excellent packaging performance, sophisticated appearance and generally lower costs as compared to their competition from *Germany*, *U.S.*, etc.

- For example, packaging equipment and solutions offered by the individual subsidiaries under *Coesia Group*, established strong brand awareness and reputation in the individual downstream product markets that each subsidiary specialized in.

Potential Barriers for Italian Companies

Intense competition in both the high-end and low-end segments

- China high-end packaging machinery market is dominated by various large, well-established international players with strong brand awareness in the markets and/or equipment categories they specialized in; e.g. *Videojet (U.S.)* dominate the Chinese labeling & coding machinery market.

- Price competition is also intensifying in the lower end product segments due to the presence of large number (7,000+) of small and medium domestic enterprises.

- This presents strong barriers to entry for Italian (especially small and medium) enterprises and thus market entry may require substantial investments and time before product demand takes off.

Rising operational costs in manufacturing in China

- Labor cost increase is a major issue for both domestic and foreign companies in China, especially in Pearl River Delta and Yangtze River Delta, e.g. Shanghai, Zhejiang, Guangdong, etc.
- From 2005 to 2015, the average labor cost in China has increased at a CAGR between 12%-17% and it is expected to continue growing at a CAGR between 6%-12% in the coming five years.
- Coupled with rising labor costs, costs of raw materials, land lease, etc. have also increased over the past decades; this has and will continue to cause lower profitability or loss in many manufacturing sectors including packaging machinery production.

Practical Options for Italian Players Approaching the Market

Possible market entry strategies

- There are several possible market entry options for Italian packaging machinery manufacturers, and can be seen by Italian companies already present in the market.
- Entry mode would depend on the company's business objectives, and it is often the case that there is no perfect solution to a specific company's objectives
- The four (plus one) main entry options for entry into the China market (more details provided later) include:

    1. *Use of distributors / agents* – simplest of all methods, if the company sells products; distributors / agents can conduct maintenance and after-sales services and serve as a service center.
    2. *Representative Office* (RO) – the simplest legal setup format; it requires minimal capital investment but is also limited in business scope.
    3. *Joint Venture* (JV) – cooperative or equity Joint Ventures with either a local company or a foreign company.
    4. *Wholly Foreign Owned Enterprise* (WFOE) – multiple types exist and is determined by business scope.
    5. *[Acquisition of local company* – generally not suitable for Small and Medium Enterprises as it requires significant resources and M&A experience to conduct proper due diligence]

- It is essential that Italian players considering entering the market seek advice from a professional service provider before establishing a presence in China as the regulatory environment and registration process can be complex.

- The table below gives a broader description of entry options for Italian players:[12]

Table: Description of entry options for Italian players

Entry Option	Reason for Choosing Option	Description/Activities	Pros	Cons
1. Use distributors / agents	Sell / Distribute products in China through agent	• Use distributor to import and sell components or product in China; need one with strong network • No legal entity needed	• Requires no direct investment in China • Relatively low risk • Use distributors' network to develop brand awareness	• May be challenging to identify a committed distributor • Results may be uncertain
2. ***Set up a Rep. Office (RO)***	Manage distributors, conduct market research and business development activities	• Manage distributors • Network, conduct business development and support activities • Note: Rep. Office cannot issue Fapiao (invoices) or directly receive payment for goods or services	• Simplest way of establishing direct China presence • Low investment • Allows company to learn local market conditions • May develop business / client network first	• Still a "light" presence (RO cannot conduct commercial transaction or issue invoice) • RO mainly limited to marketing function
3. Establish a Joint Venture (JV) with a local partner – Equity or Cooperative JV	Can be several: time to market, technology fit, sales channels, local network, etc	• Joint venture with a local machinery or product manufacturer • Equity or cooperative JV • Must check if product category is restricted or prohibited	• May provide cost advantage from manufacturing or assembling locally • Faster time-to-market • Leverage China knowledge and distribution network of local partner • Low initial investment than WFOE • Be able to offer better after-sales service and technical support	• May be risky; takes time and effort to find an appropriate partner • Chinese partner may have little to offer in terms of technology, but may provide market access • Potential IP issues • Need to manage relationship with JV partner - conflicts not uncommon, difficult to maintain control
4. Set up a Wholly Foreign Owned Enterprise (WFOE) – **Manufacturing WFOE**[13]	Manufacture products in China	• Set up factory and manufacture packaging machinery products • May use distributors to sell within China	• Full control and ownership of the company • Be able to offer better after-sales service and technical support • Highest return and most sustainable in the long run • Increasingly popular choice for many foreign players committed to China • Greater control of IP	• Higher investment and commitment required • Significant time to setup / develop the business
4. Set up a Wholly Foreign Owned Enterprise (WFOE) – ***FICE***[14]	Sell / distribute products in China	• Trade and sell/distribute packaging machinery products within China		
5. [Acquisition of local company]	Reasons for acquisition may vary	• Alternative to WFOE or JV	• May acquire local channels / knowledge quickly • Mitigate issues associated with having JV partner	• Potentially highest investment required • Difficult to conduct proper due diligence • Existing distribution network may not be suitable for distributing high-end products

Source: Sovereign Analysis

- *Important note:* while the table provides a general framework for market entry, these are not prescriptive strategies as each individual company's situation differs and may require a customized strategy.

[12] It is important to emphasize that while the table provides a general framework for market entry, these are not prescriptive strategies as each individual company's situation differs and may require a customized strategy

[13] The feasibility of setting up a Manufacturing WFOE depends on the specific sector and the individual company's situation

[14] FICE – Foreign Invested Commercial Enterprise

SUMMARY AND CONCLUSIONS

- China packaging machinery market is expected to exceed US$ 34 billion by end of 2016, driven by domestic demand from downstream consumer product sectors, e.g. F&B, personal care products where packaging is integral and closely linked to brand identity and awareness.

- Despite the overall market growth, high-end (imported) packaging machinery market failed to continue the growth momentum between 2013 and 2014 and fell sharply to US$1.5 billion, mainly due to the overall slowing economy.

- In the short term, the high-end market is likely to continue the sluggish trend until the overall economy can improve or there might be further governments' stimulus policies on using high-end equipment.

- China packaging machinery market is highly fragmented with 7,000+ domestic companies; most of these are small and medium enterprises with largely similar product offering and little differentiation in terms of specifications and design, resulting in intense regional price competition.

- High-end packaging machinery market is still dominated by international players from Germany, *Italy, Japan, U.S., Sweden*, etc., as most large domestic and foreign downstream customers turned to these well-established players in view of a lack of viable alternatives provided by the domestic companies.

- One key driver is that China has and will continue encouraging and urging enterprise investment in advanced and less energy-consuming and emission-reducing, highly-efficient and automated technology and equipment in the 13^{th} Five-Year Plan period.

- Increasing concern of food safety and demand for high quality packaging by end-consumers and large retailers will drive demand for advanced packaging equipment that Italian players are able to fulfill.

- Despite the availability of strong demand potential for Italian packaging machinery, intense competition in both high- and low-end segments, coupled with rising operational costs have become strong barriers to entry for Italian players to overcome.

- Regardless of entry option, identifying and working with qualified sales agents and distributors is crucial for success in the China market.

- Italian players who have established brand awareness and solid sales network in China might consider moving production base into China (in the form of WFOE or JV) to lower logistics costs and shorten delivery time, as China is an important market for packaging industry.

- Entering the China market may be more difficult for Italian companies that do not have a track record or a presence in China as they will be competing with well-established and well known foreign brands.