
INDUSTRY OVERVIEW

The information and statistics set out in this section and other sections of this document were extracted from different official government publications, available sources from public market research and other sources from independent suppliers, and from the Frost & Sullivan Report. We engaged Frost & Sullivan to prepare the Frost & Sullivan Report, an independent industry report, in connection with the [REDACTED]. We believe that the sources of this information are appropriate sources for such information and have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information from official government sources has not been independently verified by us, the Sole Sponsor, the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], any of the [REDACTED], the [REDACTED], any of their respective directors and advisers, or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy.

SOURCES OF THE INDUSTRY INFORMATION

We commissioned Frost & Sullivan to analyze and prepare a report regarding China’s construction industry and China’s municipal public construction industry during the period of 2018 to 2027. Frost & Sullivan is an independent global consulting firm, which was founded in 1961 in New York, offering industry research and market strategies and provides growth consulting and corporate training. We agreed to pay a commission fee of RMB960,000 to Frost & Sullivan pursuant to a service agreement reached by arm’s length negotiation. Except as otherwise noted, all of the data and forecasts contained in this section are derived from the Frost & Sullivan Report. We have also referred to certain information in the “Summary”, “Risk Factors”, “Business” and “Financial Information” sections to provide a more comprehensive presentation of the industry in which we operate.

In preparing for the report, Frost & Sullivan conducted both primary and secondary research and relied on various sources. The primary research was conducted via interviews with key industry experts and leading industry participants. The secondary research involved analysis of market data obtained from several publicly available data sources, such as National Bureau of Statistics of China and other industrial associations. The market projections in the Frost & Sullivan Report are based on the following key assumptions: (i) the overall social, economic, and political environment in China are expected to remain stable during the forecast period; (ii) China’s economic and industrial development are likely to maintain a steady growth in the forecast period; (iii) related industry key drivers are likely to drive the growth of construction industry and municipal public construction industry in China in the forecast period, such as sustained urbanization, stable market demand, well-developed regulating system and favorable policies from government, etc.; and (iv) there is no extreme force majeure or industry regulation in which the market may be affected dramatically or fundamentally.

Our Directors confirm that, to the best of their knowledge, after making reasonable inquiries and exercising reasonable care, there is no material adverse change in the market information since the date of the relevant data contained in the Frost & Sullivan Report which may qualify, contradict or have an impact on the information in this section.

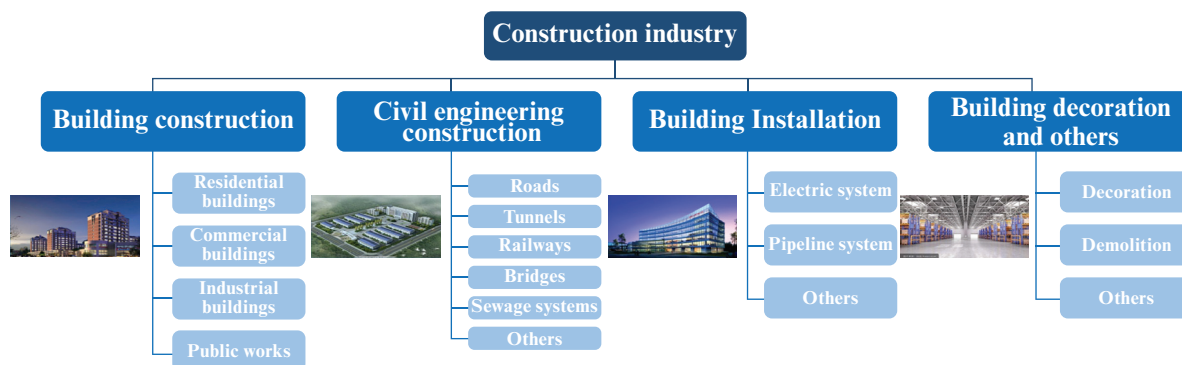
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OVERVIEW OF CONSTRUCTION INDUSTRY IN THE PRC AND TIANJIN

Definition and Classification of Construction Industry in the PRC

The construction industry has long been one of the pillar industries in the PRC, it plays a significant role in the national development. The construction industry refers to the engineering entity formed through the construction of various types of buildings, structures and the installation of equipment, which mainly encompasses the part of design, building, decoration and management. In particular, the central and local government authorities have intensively introduced incentive policies to promote better green development and infrastructures in urban and rural areas and better development patterns involving high quality green construction and green lifestyle formation.

According to the “Industrial Classification for National Economic Activities” (《國民經濟行業分類》) issued by the National Bureau of Statistics of the PRC, the construction industry in the PRC consists of (i) building construction (房屋建築業); (ii) civil engineering construction (土木工程建築業); (iii) building installation (建築安裝業); and (iv) building decoration and others (建築裝飾、裝修和其他建築業).



Source: National Bureau of Statistics, Frost & Sullivan

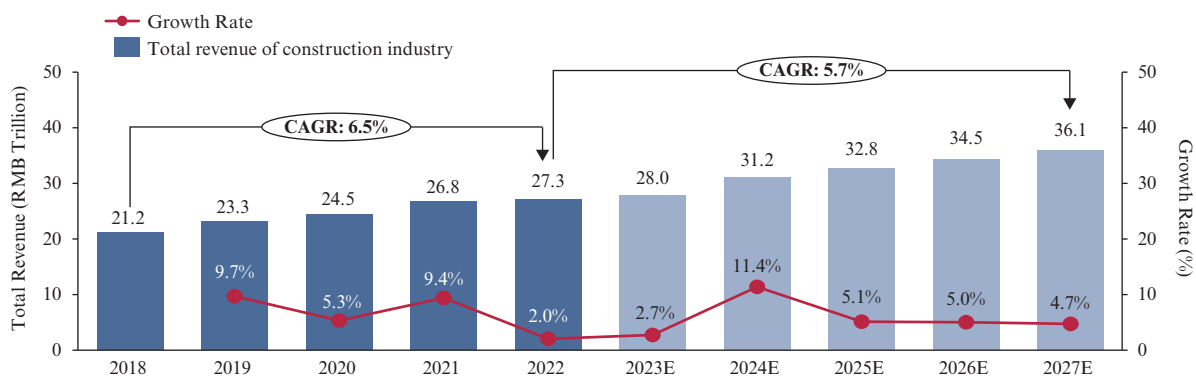
Market Size of Construction Industry in the PRC

The total revenue of the construction industry in the PRC increased from RMB21.2 trillion to RMB27.3 trillion from 2018 to 2022, representing a CAGR of 6.5%. Construction industry growth slowed down in 2020 due to construction delays arising from unanticipated disruptions caused by the COVID-19 outbreak. However, due to the effective control of COVID-19 by the PRC government, the total revenue of the construction industry has recovered in 2021.

In the future, the total revenue of the construction industry is expected to grow continuously, and is expected to reach RMB36.1 trillion in 2027, representing a CAGR of 5.7% from 2022 to 2027.

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Total Revenue of Construction Industry (the PRC), 2018–2027E



Source: National Bureau of Statistics, Frost & Sullivan

Market Trends of Construction Industry in the PRC

Increased complexity and scale of construction projects and comprehensiveness of services. As construction projects become more complex and larger in scale with the increasing urbanization rate and the rapid development of the construction industry in the PRC, opportunities are created for construction companies and require higher standards of project management in terms of modeling, evaluation and control to achieve an overall balance of time, cost, quality and safety. In addition, construction companies have been more active in recent years to develop organic growth strategies or, through mergers and acquisitions, to transform themselves into integrated full-service construction companies to better capture the growing market.

Mechanization, robotization and automation of construction processes. With the development of the PRC economy and society, the labor force in the construction industry is increasingly scarce, resulting in the rising cost of labor. According to the nation’s “14th Five-Year Construction Industry Development Plan” (《「十四五」建築業發展規劃》) issued by the Ministry of Housing and Urban-Rural Development in 2022, efforts will be made to promote parts-producing robots and explore the application scenarios for robots used for operations and maintenance. There are also plans to deploy construction robots in the construction industry for mass application by 2025. Therefore, with the development of mechanization, robotization and automation of construction processes, the demand for labor force will be reduced and higher efficiency will be expected in the future.

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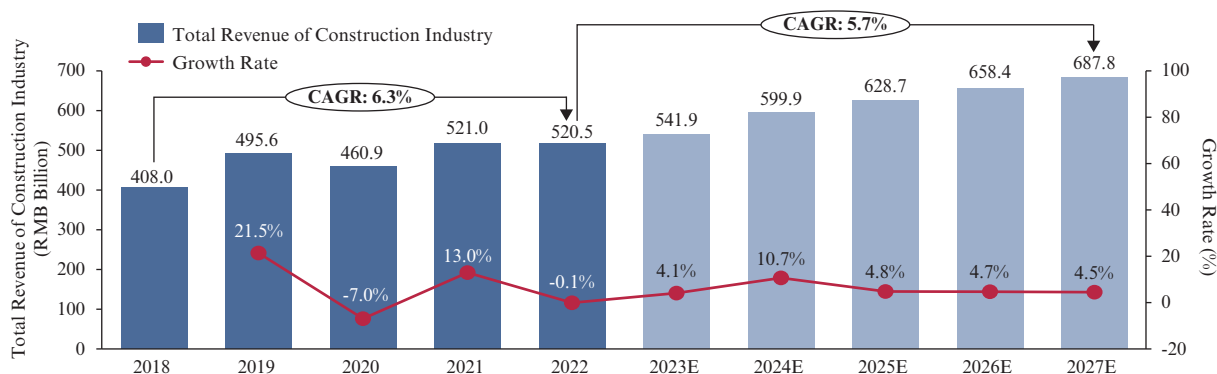
Adoption of green building technology. Green building has become increasingly important to the nation’s strategy to transform and upgrade the construction industry. Green buildings are a starting point for carbon dioxide emission peaking and achieving carbon neutrality. Under “The Fourteenth Five-Year Plan for the National Economic and Social Development of the PRC and the Outline of Long-Term Goals for 2035 (Draft)” (《中國人民共和國國民經濟和社會發展第十四個五年規劃和2035年遠景目標綱要(草案)》) raised in 2021, the PRC Government emphasizes the development of the green industry and many provincial governments have developed incentive policies to provide subsidies or tax benefits to real estate developers for their involvement in the development of green buildings. It is believed that the development of green buildings will effectively drive the growth of the construction industry, including subsectors such as new building materials, new energy and related services, in the future.

Use of digital engineering measurement management software. The use of digital engineering measurement management software is considered a trend in the construction industry. This specialized tool enables construction professionals to effectively manage construction processes by providing various functions for accurate and efficient measurement, analysis, and documentation. By application of such software, construction projects can benefit from improved accuracy, reduced errors, and increased productivity. A key advantage of digital measurement software is its ability to provide real-time data, which contributes to enhanced construction safety and reduced accidents.

Market Size of Construction Industry in Tianjin

The total revenue of construction industry in Tianjin increased from RMB408.0 billion in 2018 to RMB520.5 billion in 2022, representing a CAGR of 6.3% from 2022. In the future, Tianjin is expected to continue to steadily promote the development of the construction industry, especially in areas such as prefabricated construction and green buildings. Tianjin municipal government provides support in various aspects, including financial and tax support, transportation guarantees, etc. As a result, the total revenue of construction industry in Tianjin is forecast to reach RMB687.8 billion in 2027, growing at a CAGR of 5.7% from 2022.

Total Revenue of Construction Industry (Tianjin), 2018–2027E



Source: National Bureau of Statistics, Frost & Sullivan

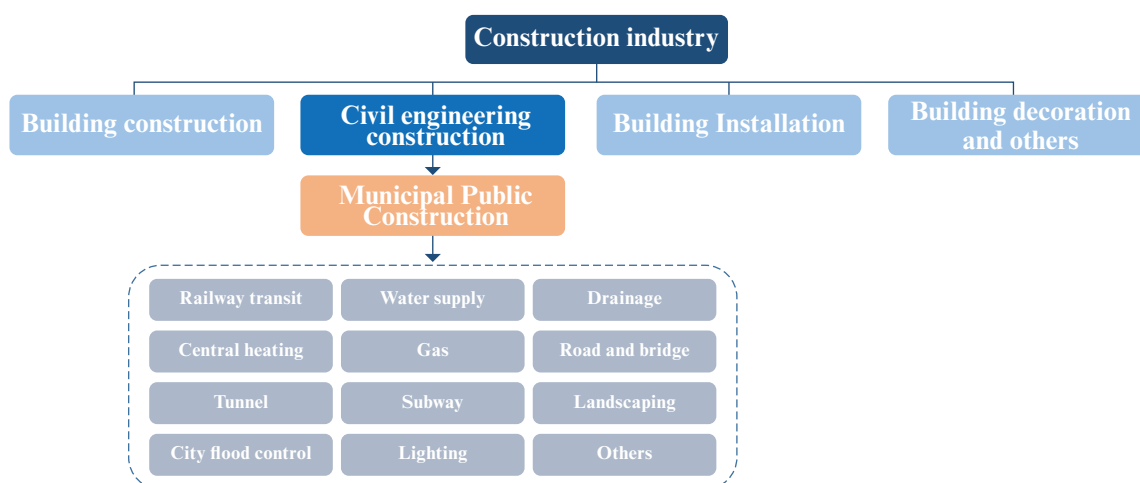
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OVERVIEW OF MUNICIPAL PUBLIC CONSTRUCTION INDUSTRY IN THE PRC AND TIANJIN

Definition and Classification of Municipal Public Construction Industry

Municipal public construction refers to the infrastructure construction of public transportation facilities, water supply facilities, drainage, gas, city flood control, environmental sanitation, lighting, etc. Municipal public construction is an essential basis for urban development and the basic condition for improving people’s living standards.

Municipal public construction mainly includes railway transit project, water supply project (including water plant), drainage project (including sewage disposal plant), central heating project (including central heating boiler station and heat exchange station), gas construction (including gas station), road and bridge construction, tunnel construction, subway construction, landscaping construction, city flood control construction, lighting construction, etc.



Source: National Bureau of Statistics, Frost & Sullivan

Market Size of Municipal Public Construction Industry in the PRC

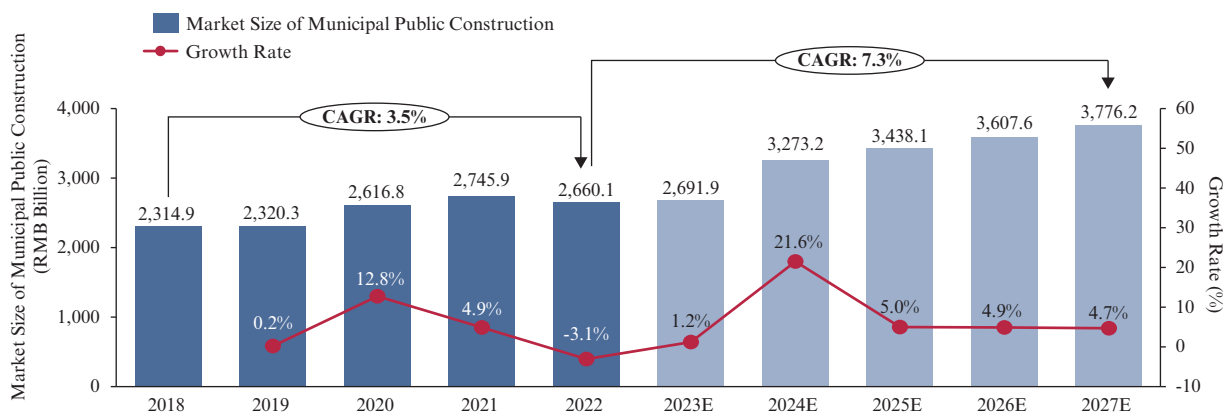
The role of the construction industry as a pillar industry of the national economy has been continuously strengthened and has made great contributions to promoting economic growth in recent years. As a major part of the construction industry, the market size in terms of investment in fixed assets for municipal public construction in the PRC represents the total social investment in urban construction, and it grew rapidly from RMB2,314.9 billion in 2018 to RMB2,660.1 billion in 2022, representing a CAGR of 3.5%.

According to the “14th Five-Year Construction Industry Development Plan” (《「十四五」建築業發展規劃》) issued by the MOHURD in January 2022, the construction sector is expected to realize comprehensive industrialization, with great improvements to the quality of buildings and its business innovation capability by 2035. The government will promote the use of information technology in the construction sector by encouraging cooperation between construction companies, internet enterprises and research institutes. The 14th Five-Year period is an essential period to accelerate the transformation and development of

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the construction industry. The market size of the municipal public construction industry in the PRC is expected to rise from RMB2,660.1 billion in 2022 to RMB3,776.2 billion in 2027, representing a CAGR of 7.3%, supported by policy and the development of the construction industry.

Market Size of Municipal Public Construction Industry (the PRC), 2018–2027E



Source: National Bureau of Statistics, Frost & Sullivan

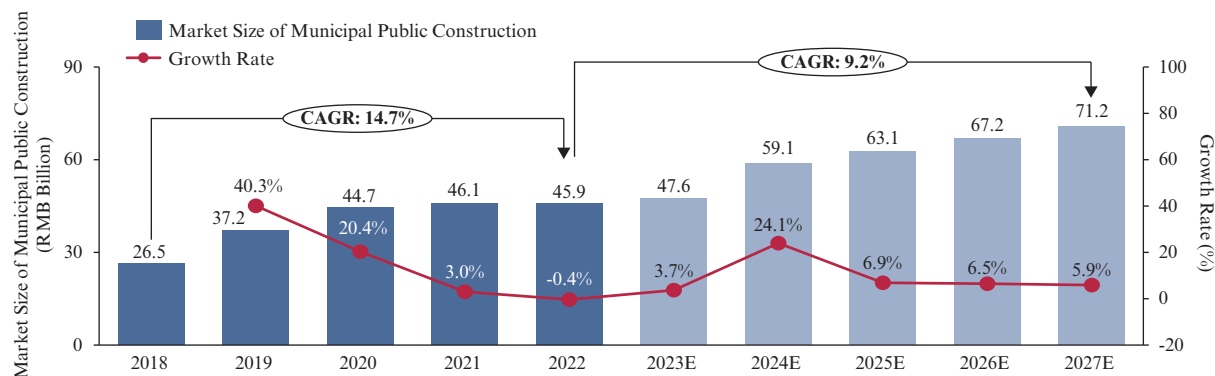
Market Size of Municipal Public Construction Industry in Tianjin

Over the past few years, Tianjin’s municipal public construction has experienced rapid development, with the functions of the city becoming increasingly enhanced. Although the growth rate of Tianjin’s municipal public construction market showed a temporary decline in 2020 and 2022, the proportion of Tianjin’s investment in fixed assets for municipal public construction as a fraction of the total investment in fixed assets for municipal public construction in the PRC has increased from 1.1% in 2018 to 1.7% in 2022. Tianjin’s municipal public construction market grew from RMB26.5 billion in 2018 to RMB45.9 billion in 2022, representing a CAGR of 14.7%.

In the future, according to the “Outline of the 14th Five-Year Plan (2021–2025) for National Economic and Social Development and Vision 2035 of the People’s Republic of China” (《國民經濟和社會發展第十四個五年規劃和2035年遠景目標綱要》), the Tianjin Municipal Government is actively implementing urban renewal actions and promoting high quality urban transformation to enhance the operational quality of municipal infrastructure. Efforts are being made to create green urban areas and to complete the renovation of old urban communities built before the end of 2000 by 2025. Additionally, Tianjin Municipal Government is advancing the development of the “Bin Hai New Area” (濱海新區) to accelerate the improvement of infrastructure and public services. As a city with well-established infrastructure and high environmental quality, Tianjin is expected to witness a rapid development from 2023 to 2027. The market size of municipal public construction in Tianjin is predicted to reach RMB71.2 billion in 2027, representing a CAGR of 9.2% from 2022 to 2027.

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Market Size of Municipal Public Construction (Tianjin), 2018–2027E



Source: National Bureau of Statistics, Frost & Sullivan

Market Size of Construction Industry in Regions Outside Tianjin

The output value of the construction industry in Shaanxi Province maintained steady growth from 2018 to 2022, showing a CAGR of 9.0% from 2018 to 2022, and is expected to reach RMB1,376.2 billion in 2027, representing a CAGR of 6.5% from 2022 to 2027. The output value of the construction industry in Jiangxi Province witnessed a rapid increase from RMB699.3 billion in 2018 to RMB1,069.5 billion in 2022, representing a CAGR of 11.2% from 2018 to 2022, and is expected to reach RMB1,552.5 billion in 2027, showing a CAGR of 7.7% from 2022 to 2027. The output value of the construction industry in Guizhou Province increased from RMB333.0 billion in 2018 to RMB426.0 billion in 2022, showing a CAGR of 6.4% from 2018 to 2022, and is expected to reach RMB543.2 billion in 2027, representing a CAGR of 5.0% from 2022 to 2027.

The market size of municipal public construction in Shaanxi Province experienced a rapid increase from RMB56.9 billion in 2018 to RMB112.7 billion in 2022, representing a CAGR of 18.6% from 2018 to 2022, and is expected to further increase to RMB282.5 billion in 2027, showing a CAGR of 20.2% from 2022 to 2027. The market size of municipal public construction in Jiangxi Province and Guizhou Province showed a rapid growth from RMB98.2 billion and RMB59.0 billion in 2018 to RMB101.7 billion and RMB90.4 billion in 2022, showing CAGRs of 0.9% and 11.3% from 2018 to 2022, respectively, and is expected to reach RMB197.5 billion and RMB188.9 billion in 2027, representing a CAGRs of 14.2% and 15.9% from 2022 to 2027, respectively.

Market Drivers of Construction Industry in Regions Outside Tianjin

Sustained urbanization. According to the Statistical Bureau of each province, the urbanization rate in Xi’an, Nanchang and Guiyang reached approximately 79.6%, 78.9%, and 80.3% in 2022, respectively. The urbanization rate is expected to continue to grow, reaching approximately 85.5%, 88.7% and 81.4% by 2027. Continuous urbanization will drive the demand for residential, industrial and commercial building construction projects, public works, and civil engineering construction, thus stimulating the development of the construction industry in these three cities.

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Growth in the economy and the infrastructure investments. The economies of Xi’an, Nanchang and Guiyang have all experienced rapid growth over the past few years. Specifically, the CAGR for nominal GDP and the output value of the construction industry in Xi’an from 2018 to 2022 reached 7.8% and 11.4%, respectively. The CAGR for nominal GDP and the output value of the construction industry in Nanchang from 2018 to 2022 reached 8.9% and 11.3%, respectively. The CAGR for nominal GDP and the output value of the construction industry in Guiyang from 2018 to 2022 reached 7.2% and 11.4%, respectively. As a capital-driven industry, the development of the construction industry is largely due to the continuous growth in fixed asset investment. The output value of construction industry in Xi’an, Nanchang and Guiyang reached RMB600.1 billion, RMB559.0 billion and RMB314.9 billion in 2022, showing growth rates of 11.0%, 9.5%, and 9.0% compared to 2021, respectively. The government of these cities have consistently maintained public spending on infrastructure development as a means of stimulating the macroeconomy and further improving the growth of the construction industry.

Favorable policies from government. In recent years, local government authorities have intensively introduced incentive policies to promote the development of the construction industry. According to the “24 Measures for Optimizing the Business Environment in the Construction Market in Xi’an” (《西安市優化建築市場營商環境二十四條措施》) published by the Xi’an Municipal Bureau of Housing and Urban-Rural Development in May 2023, the policy is primarily aimed at promoting the high-quality development of the construction industry in Xi’an, supporting business transformation and upgrading, focusing on continuous improvement of the construction market environment. Also, according to the “Notice on Measures to Promote the High-Quality Development of the Construction Industry in Nanchang” (《關於推進南昌市建築業高品質發展的若干措施的通知》) published by The People’s Government of Nanchang in February 2023, efforts will be made to enhance the competitiveness of construction enterprises in Nanchang and promote the high-quality development of the construction industry, and to fully leverage the driving role of the construction industry in the economic and social development of the city — specific measures include supporting construction enterprises to enter the infrastructure construction sector and actively promoting the engineering project general contracting model, etc. According to the “Notice on Several Measures to Promote the High-Quality Development of the Construction Industry in Guiyang” (《貴陽市促進建築業高品質發展若干措施的通知》) published by The People’s Government of Guiyang in August 2023, efforts will be made to support enterprises to grow larger, encourage social investment projects to prioritize the selection of construction industry enterprises with strong social responsibility when choosing implementation companies to play a guiding and exemplary role for projects, continuously optimize the approval and management system for construction projects, and deepen the reform of the approval system for construction projects. All these favorable policies are one of the main drivers for the development of the construction industry.

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COMPETITIVE LANDSCAPE OF MUNICIPAL PUBLIC CONSTRUCTION INDUSTRY IN TIANJIN

There were 2,547 construction enterprises in Tianjin in 2022, and the Company accounted for a market share of 0.1% in the overall construction market in terms of construction revenue in Tianjin in 2022.

The municipal public construction industry is highly fragmented in Tianjin. In 2022, the top five and top 10 municipal private construction companies accounted for an aggregate market share of 3.0% and 4.0% respectively in terms of municipal public construction revenue among all municipal public construction companies in Tianjin.

In 2022, the Company ranked 4th among private municipal public construction companies in terms of municipal public construction revenue in Tianjin, representing a market share of approximately 0.2%.

Top Ten Private Municipal Public Construction Companies Headquartered in Tianjin, 2022

Ranking	Private municipal public construction company	Revenue of municipal public construction (RMB million)	Market share (%)
1	Company A	762.9	1.7%
2	Company B	253.6	0.6%
3	Company C	138.2	0.3%
4	The Company	86.5	0.2%
5	Company D	84.0	0.2%
6	Company E	82.9	0.2%
7	Company F	80.0	0.2%
8	Company G	75.4	0.2%
9	Company H	73.3	0.2%
10	Company I	69.7	0.2%
	Top five	1,325.2	3.0%
	Top ten	1,706.5	4.0%
	Total	45,900.0	100.0%

Notes:

- The Company's data is provided by the Company.
- Company A is a private municipal public construction company founded in 1986 and headquartered in Tianjin, with a registered capital of RMB70.3 million. It is principally engaged in municipal public construction, building decoration and petrochemical engineering projects.

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3. Company B is a private municipal public construction company founded in 2011 and headquartered in Tianjin, with a registered capital of RMB50.0 million. It is principally engaged in municipal public construction, earthworks and landscaping projects.
4. Company C is a private municipal public construction company founded in 2009 and headquartered in Tianjin, with a registered capital of RMB110.0 million. It is principally engaged in municipal public construction, building construction and building interior decoration projects.
5. Company D is a private municipal public construction company founded in 2013 and headquartered in Tianjin, with a registered capital of RMB58.0 million. It is principally engaged in municipal public construction, building construction projects and landscaping projects.
6. Company E is a private municipal construction company founded in 2007 and headquartered in Tianjin, with a registered capital of RMB110.0 million. It is principally engaged in municipal construction, including landscape construction, road and bridge construction etc.
7. Company F is a private municipal construction company founded in 2010 and headquartered in Tianjin, with a registered capital of RMB51.7 million. It is primarily engaged in municipal construction, building installation construction, earthwork and foundation construction.
8. Company G is a private municipal construction company founded in 2017 and headquartered in Tianjin, with a registered capital of RMB100.0 million. It is primarily engaged in municipal construction, specialized equipment installation projects etc.
9. Company H is a private municipal construction company founded in 1997 and headquartered in Tianjin, with a registered capital of RMB150.0 million. It is primarily engaged in municipal construction, mechanical and electrical installation projects, environmental protection projects etc.
10. Company I is a private municipal construction company founded in 2015 and headquartered in Tianjin, with a registered capital of RMB50.0 million. It is principally engaged in municipal construction and building construction.

Source: Frost & Sullivan

OVERVIEW OF THE BUILDING CONSTRUCTION INDUSTRY IN THE PRC AND TIANJIN

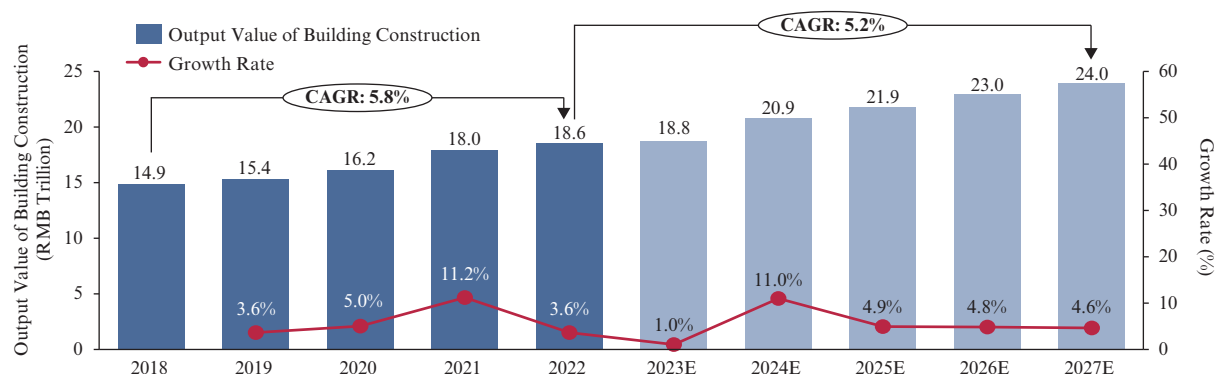
Market Size of the Building Construction Industry in the PRC

Urbanization development drives the demand for building construction projects. Over the past years, the output value of building construction in the PRC increased from RMB14.9 trillion in 2018 to RMB18.6 trillion in 2022, showing a CAGR of 5.8% from 2018. With the increasingly widespread application of information technology in construction and the use of new building materials, housing safety and quality are steadily improving. Moreover, according to the 2022 conference of Ministry of Housing and Urban-Rural Development, in 2023, there will be a focus on increasing the supply of affordable rental housing, advancing the renovation of shantytown areas, and accelerating the resolution of housing difficulties for new urban residents, and other groups.

Therefore, the output value of building construction in the PRC is expected to increase at a CAGR of 5.2% from 2022 and is predicted to reach RMB24.0 trillion by the end of 2027.

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Output Value of Building Construction (the PRC), 2018–2027E



Source: National Bureau of Statistics, Frost & Sullivan

Market Size of the Building Construction Industry in Tianjin

Building construction accounted for the second largest portion of market share in the Tianjin construction industry in terms of output value. The output value of building construction in Tianjin increased from RMB124.3 billion in 2018 to RMB153.7 billion in 2022, showing a CAGR of 5.5% from 2018 to 2022. In 2022, the output value of building construction accounted for 32.4% of the total output value of the Tianjin construction industry. With the support of policies such as the establishment of a free trade pilot zone, the construction of a national independent innovation demonstration zone, and the opening of the Binhai New Area, the Tianjin construction industry is expected to further develop in the future.

In line with the growth of the construction industry, the output value of the Tianjin building construction industry is forecasted to reach RMB201.5 billion in 2027, representing a CAGR of 5.6% from 2022 to 2027. The output value of building construction is expected to account for approximately 32.9% of the total output value of the construction industry by the end of 2027.

ENTRY BARRIERS OF CONSTRUCTION INDUSTRY

Capital Barrier. The construction industry requires substantial capital, including payment of significant deposits, guarantees, net assets and sufficient cash flow. It is an important barrier for new entrants as it is essential for meeting the qualification requirement and the project’s smooth operation. Generally, the capital capability of a tenderer is an important selection criterion in public tendering. It is difficult for new entrants without sufficient capital and cash flow to undertake construction projects.

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Professional and Technical Barrier. The industry demands specialized knowledge and skills in various areas such as civil engineering, structural engineering, mechanical engineering, and water supply and drainage systems, requiring contractors to possess significant experience and practical capabilities to address technical challenges and complex projects, creating high professional and technical barriers. In order to maximize the capability of construction companies to undertake different types of construction works; construction companies are required to possess various kinds of expertise and qualifications.

Good Reputation and Track Record. Brand reputation and track records play an important role in the success of contractors operating in the construction industry because their proven track record and reputation are considered an explicit endorsement of their construction quality and contractual capacity, which is attractive to their customers. Furthermore, with the ongoing reforms in the credit management system of the construction industry, the significance of reputation and proven track record is expected to grow further. Established construction companies with a good reputation have an advantage in acquiring projects and attracting customers, making it challenging for new entrants to compete in the market.

Qualification Barrier. Construction contractors are required to hold relevant licenses or qualifications to demonstrate they possess the professional skills to undertake the relevant types of construction works. Main contractors are required to obtain the required qualifications which are approved by the MOHURD and local government authorities in order to undertake construction works in the PRC. Also, they are required to attain certain credit standing to ensure their ability to fulfill their contractual obligations.

Challenges of the Construction Industry

- ***Increasing of raw materials and labor cost:*** Rising costs is one of the challenges facing the construction industry. Increasing raw material costs are influenced by various factors such as fluctuations in global commodity prices, supply and demand, and changes in government regulations and policies. In addition, rising labor costs also pose challenges to the construction industry. Skilled workers are in high demand, leading to steady wage increases. As a result, employers must provide more competitive salaries to attract skilled workers, posing a challenge for construction companies.
- ***Labor shortage:*** The shortage of skilled labor further exacerbates the challenge, as the search for qualified workers becomes more difficult and competitive. Due to long construction cycles and complex working conditions, many young people prefer jobs in other industries, resulting in a shortage of young workers in the construction workforce. Moreover, as fertility rates have declined, the demographic dividend is gradually diminishing. For labor-intensive construction industries, the labor shortage further exacerbates the aging of the construction industry. Labor shortages affect project completion efficiency and quality, and can also lead to higher construction costs. Therefore, labor shortage is one of the challenges to the development of the construction industry.

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- Technology upgrade:** The development of green buildings imposes high requirements on the entire construction process, such as R&D, design, construction, and operation and maintenance. For example, the development of green buildings is one of the future trends in the construction industry, and achieving green building goal requires advanced industrial manufacturing technology, production techniques, etc. However, the technologies of most companies are still relatively outdated, making it a challenge for the construction industry to enhance the necessary technological transformation in the future.

COMPETITIVE LANDSCAPE OF PRIVATE CONSTRUCTION COMPANY WITH SELF-DEVELOPMENT CONSTRUCTION PROJECT MANAGEMENT SOFTWARE IN TIANJIN

As of the Latest Practicable Date, the Company is the only private construction company in Tianjin to apply self-developed construction project management software for construction projects.

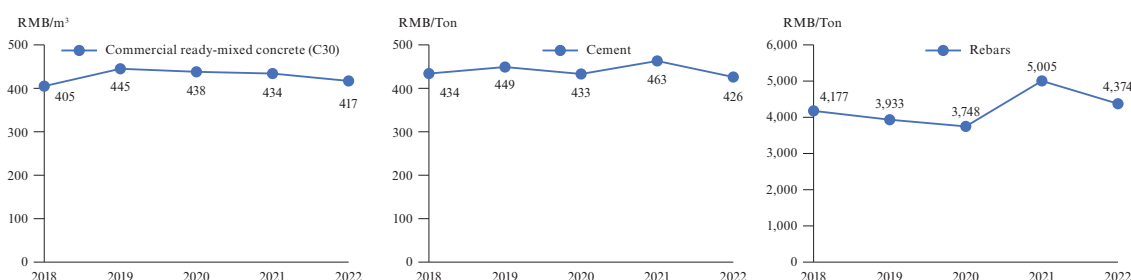
Digital engineering measurement management (數字化工程計量管理) is an essential aspect of the construction markets. It enables businesses to efficiently manage project costs, schedules, and quality.

Construction companies can enhance their competitive advantage through digital engineering measurement management software to streamline processes, optimize resource allocation, improve project coordination, and achieve greater efficiency and accuracy in engineering measurement management through effective use of the software, as this software offers various functions such as quantity take-offs, cost analysis, contract management, schedule control, and quality inspections.

Empowered by digital engineering measurement management software, construction companies deliver projects more efficiently to build higher customer trust and maintain a leading position in the industry.

HISTORICAL PRICE TREND OF CONSTRUCTION COSTS

Historical Price Trend of Major Raw Materials in the PRC (Commercial ready-mixed concrete, Cement, Rebars), 2018–2022



Notes:

- All prices are exclusive of tax.

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2. Grades of concrete are defined by the number next to the letter “C” which indicates the minimum compressive strength the concrete must possess after 28 days. Prices of C30 ready-mixed concrete is used in the respective graph above for illustrative purpose.
3. The prices from 2018 to 2022 are calculated based on the average of the average monthly price for the relevant year.

Source: National Bureau of Statistics, National Development and Reform Commission, Frost & Sullivan

Commercial ready-mixed concrete, cement, and rebars are three major raw materials in the construction industry.

The price of raw materials experienced a temporary decline in 2020 and gradually recovered in 2021 which was mainly attributable to (i) a cyclical decline in the first quarter, which is a traditional off-season during a year; (ii) the outbreak of COVID-19 which led to the decrease in the supply; and (iii) the strict control of the PRC Government which facilitated the work resumption and the demand recovery of the construction industry. The prices of raw materials decreased in 2022 mainly due to the decrease in the overall number of new construction projects, leading to a sluggish real estate market. The downturn in the real estate industry led to a decrease in the demand for raw materials such as commercial ready-mixed concrete, cement, and rebars. As a result, the price of raw materials showed a declining trend in 2022. Due to the excess raw material production capacity, the prices of commercial ready-mixed concrete, cement, and rebars were showing a downward trend in 2023.

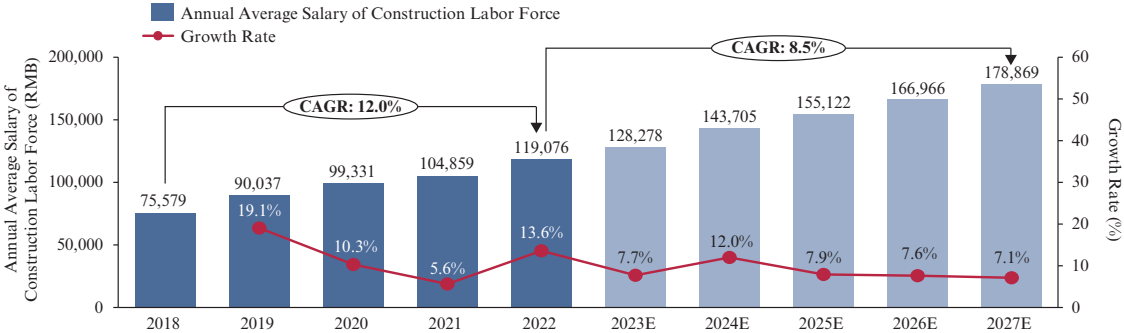
The price of commercial ready-mixed concrete showed a relatively stable trend from 2018 to 2022. The price increased from RMB405 per m³ in 2018 to RMB417 per m³ in 2022, representing a CAGR of 0.7% from 2018 to 2022. In 2023, the price of commercial ready-mixed concrete further decreased to RMB366 per m³.

The prices of cement and rebars showed a similar trend from 2020 to 2022. The prices of cement and rebars increased from RMB433 per ton and RMB3,748 per ton in 2020 to RMB463 per ton and RMB5,005 per ton in 2021, respectively. In September 2021, due to the sustained increase in the price of global commodities and the implementation of Measures to Improve the Dual Control System on Energy Intensity and Total Consumption (《完善能源消費強度和總量雙控制度方案》) issued by the NDRC, various cities implemented measures to restrict power consumption and production, leading to a significant decline in output and a situation of supply shortage and high demand. As a result, the price of raw materials showed a surge in prices in 2021. In 2022, the price of cement and rebars decreased to RMB426 per ton and RMB4,374 per ton, representing a CAGR of -0.5% and 1.2% from 2018, respectively. In 2023, the price of cement further decreased to RMB348 per tonne.

The major raw material price trends are expected to remain relatively stable over the forecast period. Specific price forecasts prices for major raw materials are not available due to variables and uncertainties in the construction industry.

INDUSTRY OVERVIEW

Annual Average Salary of Construction Labor Force (Tianjin), 2018–2027E



Source: National Bureau of Statistics, Frost & Sullivan

The annual average salary of employed persons in construction industry in Tianjin showed a rapid increase from 2018 to 2022, representing a CAGR of 12.0%.

The steady development of the construction industry continues to provide new employment opportunities for the society. Moreover, due to the modernization level of the construction supply chain continues to improve, with increasing integration and application capabilities of information technologies such as Building Information Modeling (BIM), big data, intelligent systems, digital engineering measurement management software, cloud computing, and the Internet of Things (IoT). As a result, construction industry enterprises need to offer higher salaries to attract talented employees. In the future, the annual average salary of employed persons in construction industry in Tianjin is predicted to increase at a CAGR of 8.5%, rising from RMB119,076 in 2022 to RMB178,869 in 2027.