Construction Outlook in China

Industry Study with Forecasts for 2015 & 2020

Study #2767 | July 2011 | $5400 | 237 pages
Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT
General .............................................4
Economic Overview..............................5
Recent Economic Performance..............5
Economic Outlook..............................7
Demographic Overview........................12
Population........................................12
Urbanization.....................................15
Households......................................16
Industrialization & Manufacturing Trends 18
Gross Fixed Capital Formation Trends......21
Labor Force & Employment Patterns........22
Personal Income Trends.......................25
Banking System & Regulations..............28
Currency Exchange Rates......................32
Inflation & Pricing Patterns...................35
Legal & Regulatory Environment.............37
Construction Technology & Quality.........41
The Five-Year Plan.............................43

OVERVIEW
General .............................................46
Construction Expenditures by Type.........46
Construction Expenditures by Market......49
International Environment...................52
Construction Expenditures for Selected Countries........52
Foreign Participation in China’s Construction Industry ...54

RESIDENTIAL BUILDING
General .............................................56
New Housing Construction Expenditures ...61
New Housing Completions.....................64
Single Family...................................65
Multiple Family................................67
Additions & Alterations.......................68
Maintenance & Repairs.......................70
Housing Stock...................................72
Single Family...................................75
Multiple Family................................76
Ownership.......................................78
Living Space....................................79
Rural............................................81
Urban............................................82

NONRESIDENTIAL BUILDING
General .............................................84
New Construction................................88
Additions & Alterations.......................89
Maintenance & Repairs.......................90
Structure Types................................90
Industrial..........................................92
Office & Commercial..........................93
Institutional......................................94
Other...............................................95
Nonresidential Building Stock...............96

NONBUILDING CONSTRUCTION
General .............................................98
New Construction................................101
Maintenance & Repairs.......................103
Structure Types................................103
Roads & Other Transportation Infrastructure..........105
Utilities..........................................108
Other...............................................109

REGIONAL TRENDS
General .............................................110
Regional Demographic/Economic Trends ....112
Population Patterns............................113
Economic Outlook..............................115
Regional Construction Expenditures..........117
Central-North..................................119
Overview........................................119
Construction Expenditures...................121
Northeast.........................................123
Overview........................................123
Construction Expenditures...................125
Central-East.....................................127
Overview........................................127
Construction Expenditures...................129
Central-South...................................131
Overview........................................131
Construction Expenditures...................133
Southwest.......................................135
Overview........................................135
Construction Expenditures...................137
Northwest.......................................139
Overview........................................139
Construction Expenditures...................141

INDUSTRY STRUCTURE
General .............................................144
Industry Composition..........................145

Market Share......................................148
Marketing..........................................151
Financial Issues & Requirements...........154
Capital Expenditures.........................155
Project Funding.................................157
State................................................157
Private Domestic...............................158
Foreign Investment.............................158

COMPANY PROFILES
Aker Solutions...................................160
Anhui Construction Engineering.............161
Balfour Beatty....................................163
Bechtel Group.....................................165
Beijing Construction Engineering............167
Beijing Urban Construction....................169
Bilfinger Berger.................................171
Black & Veatch.................................173
Bouygues SA.....................................175
China Communications Construction........177
China Gezhouba Group.........................180
China National Chemical Engineering.....182
China National Machinery Industry.........183
China Railway Construction..................185
China Railway Group Limited...............187
China State Construction Engineering......189
Chiyoda Corporation............................192
CTCI Corporation...............................194
Dongfang Electric Corporation...............197
Fluor Corporation...............................198
Foster Wheeler AG..............................200
Fujian Construction Engineering............202
Guangdong Construction Engineering......204
Guangsha Construction........................205
Hebei Construction............................206
HOCHTIEF AG...................................208
Hunan Construction Engineering.............210
Jacobs Engineering............................211
Jiangsu Suzhong Construction...............213
Lend Lease.......................................215
Metallurgical Group of China...............217
NWS Holdings..................................220
Qingjian Group.................................222
Shaanxi Construction Engineering.........223
Shanghai Construction.........................225
Shanghai Urban Construction.................227
Sichuan Huashi Group.........................228
Sinohydro Corporation........................230
URS Corporation...............................232
Zhejiang Construction........................234

Other Companies Mentioned in Study ....236

Click here to purchase online
List of Tables

EXECUTIVE SUMMARY
1 Summary Table .................................. 3

MARKET ENVIRONMENT
1 Gross Domestic Product of China .......... 11
2 Population of China ......................... 14
3 Households in China by Region .......... 17
4 Manufacturing Value Added in China ...... 20
5 Gross Fixed Capital Formation in China by Region .......... 22
6 Urban Labor Force & Employment in China, 2000-2010 ....... 24
7 Per Capita Gross Domestic Product in China by Region .......... 27
8 Interest Rates in China, 2000-2010 .......... 32
9 Chinese Currency Exchange Rates, 2000-2010 .......... 34
10 Construction Pricing Deflators in China .......... 37

OVERVIEW
1 Construction Expenditures in China by Type .......... 48
2 Construction Expenditures in China by Market .......... 51
3 Construction Expenditures for Selected Countries, 2000-2010 ...... 53
4 Foreign Participation in China’s Construction Industry .......... 55

RESIDENTIAL BUILDING
1 Residential Building Construction Expenditures in China by Type ...... 60
2 New Housing Construction Expenditures in China .......... 63
3 New Housing Completions in China ...... 65
4 Residential Building Addition & Alteration Expenditures in China ...... 70
5 Residential Building Maintenance & Repair Expenditures in China ...... 72
6 Housing Stock in China by Type & Ownership .......... 74
7 Average Living Space in China ............. 80

NONRESIDENTIAL BUILDING
1 Nonresidential Building Construction Expenditures in China by Type ...... 87
2 Nonresidential Building Construction Expenditures in China by Structure .......... 91
3 Nonresidential Building Stock in China .......... 97

NONBUILDING CONSTRUCTION
1 Nonbuilding Construction Expenditures in China by Type .......... 101
2 Nonbuilding Construction Expenditures in China by Structure .......... 104
3 Paved Roads in China by Region .......... 107

REGIONAL TRENDS
1 Population of China by Region .......... 114
2 Gross Domestic Product of China by Region .......... 116
3 Construction Expenditures in China by Region .......... 118
4 Central-North Region of China: Construction Expenditures .......... 123
5 Northeast Region of China: Construction Expenditures .......... 127
6 Central-East Region of China: Construction Expenditures .......... 131
7 Central-South Region of China: Construction Expenditures .......... 135
8 Southwest Region of China: Construction Expenditures .......... 139
9 Northwest Region of China: Construction Expenditures .......... 143

INDUSTRY STRUCTURE
1 Revenue Data: Selected Construction Companies, 2010 .......... 147
2 Selected Cooperative Agreements ...... 153

List of Charts

MARKET ENVIRONMENT
1 Population of China by Age, 2000-2020 .......... 14
2 Households in China by Region, 2000-2020 .......... 18
3 Urban Labor Force & Unemployment Rate in China, 2000-2010 .......... 25
4 Per Capita Gross Domestic Product in China by Region, 2010 .......... 28

OVERVIEW
1 Construction Expenditures in China by Type, 2000-2020 .......... 49
2 Construction Expenditures in China by Market, 2000-2020 .......... 51

RESIDENTIAL BUILDING
1 Residential Building Construction Expenditures in China by Type, 2000-2020 .......... 61
2 New Housing Construction Expenditures in China, 2000-2020 ...... 63
3 Housing Stock in China by Type, 2000-2020 .......... 75
4 Average Living Space in China, 2000-2020 .......... 81

NONRESIDENTIAL BUILDING
1 Nonresidential Building Construction Expenditures by Type, 2010 ...... 88
2 Nonresidential Building Construction Expenditures by Structure, 2010 ...... 92

NONBUILDING CONSTRUCTION
1 Nonbuilding Construction Expenditures in China by Type, 2010 ...... 105
2 Total & Paved Roads in China, 2000-2020 .......... 107

REGIONAL TRENDS
1 Gross Domestic Product of China by Region, 2010 .......... 116
2 Construction Expenditures in China by Region, 2010 .......... 119
3 Central-North Region of China .......... 121
4 Northeast Region of China .......... 125
5 Central-East Region of China .......... 129
6 Central-South Region of China .......... 133
7 Southwest Region of China .......... 137
8 Northwest Region of China .......... 141

INDUSTRY STRUCTURE
1 Construction Market Share in China by Company, 2010 .......... 148
Demand in China to rise 9.4% yearly through 2015

Construction expenditures in China are expected to rise 9.4 percent per annum in real terms through 2015, moderating from the rapid pace of the 2005-2010 period. Gains will be bolstered by a growing domestic economy, ongoing urbanization and industrialization, rebounding foreign investment funding, continuing efforts to expand and upgrade physical infrastructure, and rising income levels. The three major construction segments -- residential buildings, nonresidential buildings and nonbuilding structures -- each accounted for approximately one-third of total spending in 2010.

Nonbuilding sector to be fastest growing market

The nonbuilding construction sector will advance at a double-digit annual rate in real terms through 2015. Government spending initiatives are the predominant drivers of nonbuilding construction activity. Growth will benefit from state-led efforts to expand and upgrade the country’s transportation infrastructure such as highways, railways and subway systems, and airports. Utilities construction will also contribute to nonbuilding construction spending gains, as the government continues to increase the country’s power generation capacity and improve electricity transmission networks, as well as expand and improve municipal water supply coverage and gas distribution.

Spending on residential buildings is projected to grow at a slightly slower annual pace in real terms than the nonbuilding sector through 2015. Gains will be primarily supported by rising personal income levels and ongoing population migration from rural to urban areas. Government efforts to improve living conditions for low-income earners will also bolster residential building construction spending.

Nonresidential building expenditures are forecast to also rise at a strong pace in real terms through 2015, although at the least fastest pace of the three sectors. Growth will be driven by strong increases in construction spending on commercial and office applications, spurred by a growing services sector as well as rising personal income levels. However, a moderation in growth in the manufacturing sector will restrain gains, and nonresidential building construction spending will increase more slowly than both the nonbuilding and residential building segments.

Northwest China to lead market gains by region

China consists of distinct regional markets characterized by different climates, demographics, and levels of economic development. The Central-East region -- home to about one-third of the country's total population and economic output -- supports a huge construction market, which will account for 43 percent of the overall spending on construction in China in 2015. Construction expenditures in the Northwest region are expected to enjoy the fastest growth of any region in China, benefiting from the government’s “Great Western Development” strategy.
Residential Building

Additions & Alterations

Expenditures on residential building additions and alterations are projected to grow 6.6 percent annually through 2015. While advances will continue to trail the forecast pace for overall housing expenditures, further increases will help fuel gains, particularly in the residential building alterations segment. Spending will benefit in part from government subsidies for alterations of dilapidated rural houses (e.g., walls and roofs).

Government policies intended to increase building energy efficiency will boost spending on additions such as insulation materials added on walls and roofs. The Flat to Slope roof conversion project will also contribute to market gains. In addition, many multifamily houses without separate kitchens and bathrooms will require the addition of flooring and plumbing fixtures in order to get such applications. Elevators and outside wall insulation will also be added to some older apartments.

However, a discontinuation of shell construction practices (reducing aftermarket demand for new carpeting, interior doors, etc.) and suggested conditions in urban areas (limiting room for building expansions) will restrain growth in addition and alteration construction activities. Continued demolition of older housing units -- including many of the substandard structures built during the 1980s and 1990s -- will prevent addition and alteration construction expenditures from climbing at a faster rate through 2015.

Spending on housing alterations accounted for 73 percent of all residential addition and alteration spending in 2010, and this segment is projected to continue to lead market growth by rising 7.1 percent annually through 2015. Residential building alterations include construction or removal of walls and doorways, replacement of still-functional roofing and flooring, etc. Supported by rising living standards and income levels, spending on housing alterations is expected to climb at a faster pace than

---

Table V-2
NONRESIDENTIAL BUILDING CONSTRUCTION EXPENDITURES IN CHINA BY STRUCTURE (billion 2009 yuan)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Fixed Capital Formation</td>
<td>4185</td>
<td>8225</td>
<td>17765</td>
<td>26050</td>
<td>34300</td>
</tr>
<tr>
<td>¥ nonres bldg construct/000¥ GFCF</td>
<td>141</td>
<td>174</td>
<td>177</td>
<td>180</td>
<td>190</td>
</tr>
<tr>
<td>Nonresidential Building Construction</td>
<td>592</td>
<td>1432</td>
<td>3148</td>
<td>4690</td>
<td>6520</td>
</tr>
<tr>
<td>Industrial</td>
<td>222</td>
<td>677</td>
<td>1541</td>
<td>2323</td>
<td>3270</td>
</tr>
<tr>
<td>Office &amp; Commercial</td>
<td>210</td>
<td>477</td>
<td>1056</td>
<td>1599</td>
<td>2261</td>
</tr>
<tr>
<td>Institutional</td>
<td>106</td>
<td>185</td>
<td>303</td>
<td>446</td>
<td>590</td>
</tr>
<tr>
<td>Other</td>
<td>54</td>
<td>93</td>
<td>248</td>
<td>322</td>
<td>399</td>
</tr>
</tbody>
</table>

---

Chart VII-2
CONSTRUCTION EXPENDITURES IN CHINA BY REGION, 2010
(9.1 trillion 2009 yuan)

---

Order now, click here!
Shanghai Urban Construction Group Corporation
500 Fushan Road
Pudong New District, Shanghai 200122
China
86-21-5830-1000
http://www.sucgcn.com

Revenues: ¥25.8 billion [US$3.8 billion] (2010, reported by company)
Employment: 12,000 (estimated)

Key Services: design and general construction contracting services

International Contact: Mr. Renwei Zhu, President

Shanghai Urban Construction Group is a state-owned enterprise that provides construction services for large-scale projects and is involved in infrastructure project financing and real estate development. The Company serves markets in China and elsewhere in the world, including Singapore, Thailand, India and Angola.

The Company is active in the Chinese construction industry through the provision of design and general construction contracting services for the construction and renovation of a variety of building and nonbuilding structures, including high-rise buildings, bridges, roads, tunnels, metro lines, airports, viaducts, and pipelines. Shanghai Urban Construction Group has rendered services for such projects as the construction of Shanghai International Building, the Wenhui-Xinmin United Press Building, the Shanghai Yangtze River Tunnel Bridge, Shanghai Wusong Floodgate Bridge, the runway for the Xiamen Gaoqi Airport, the Fuquan Expressway and segments of the Yanan Road viaduct. The Company has won provincial and national awards for many of its projects.

TABLE IV-3
NEW HOUSING COMPLETIONS IN CHINA

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New Housing Completions (mil sq m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>¥/square meter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>single family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>multiple family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of New House Completions (bil ¥)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>square meters/unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>single family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>multiple family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Housing Units (000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“...The number of multifamily housing units will rise 3.8 percent annually through 2015, far outpacing projected gains for single family housing. Gains will benefit from massive spending on new multiple family housing construction, which, as stated above, will be six times that for single family housing in 2015. Moreover, expansion of urban industrial areas will result in the leveling of millions of single family farmhouses as cities and towns encroach on what was once agricultural land. However,...” --Section IV, pg. 73
Corporate Use License

Now every decision maker in your organization can act on the key intelligence found in all Freedonia studies. For an additional $2600, companies receive unlimited use of an electronic version (PDF) of the study. Place it on your intranet, e-mail it to coworkers around the world, or print it as many times as you like,

Click here to learn more about the Corporate Use License

* Please check appropriate option and sign below to order an electronic version of the study.

□ Individual Use License Agreement

The undersigned hereby represents that the above captioned study will be used by only ___ individual(s) who are employees of the company and that the study will not be loaded on a network for multiple users. In the event that usage of the study changes, the Company will promptly notify Freedonia of such change and will pay to Freedonia the appropriate fee based on Freedonia’s standard fee schedule then in effect. Note: Entire company corporate use license, add $2600; one additional user, add $600; two additional users, add $1200; three additional users, add $1800.

□ Corporate Use License Agreement

The above captioned study may be stored on the company’s intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.

□ Credit Card Orders

For convenience, Freedonia accepts American Express, MasterCard or Visa. Credit card purchases must include account number, expiration date and authorized signature.

□ Orders Outside of the US

Checks must be made payable in US funds, drawn against a US bank and mailed directly to The Freedonia Group. For wire transfers please contact our customer service department at info@freedoniagroup.com. Credit cards accepted.

Free Handling & Shipping

There is NO charge for handling or UPS shipping in the US. Expect delivery in 3 to 5 business days. Outside the US, Freedonia provides free airmail service. Express delivery is available at cost.
About The Freedonia Group

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

- Chemicals
- Plastics
- Life Sciences
- Packaging
- Building Materials
- Security & Electronics
- Industrial Components & Equipment
- Automotive & Transportation Equipment
- Household Goods
- Energy/Power Equipment

Freedonia Custom Research

Freedonia Custom Research delivers the same high quality, thorough and unbiased assessment of an industry or market as an industry study. Since the research initiative is based upon a company’s specific needs, companies harness Freedonia’s research capabilities and resources to answer unique questions. When you leverage the results of a Freedonia Custom Research engagement, you are able to obtain important answers to specific questions and issues associated with: mergers and acquisitions, new product launches/development, geographic expansion, entry into new markets, strategic business planning, and investment and funding decisions.

Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia’s team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.

Other Studies

Asphalt
This study analyzes the US asphalt product industry. It presents historical demand data for the years 2000, 2005 and 2010, and forecasts for 2015 and 2020 by asphalt product (e.g., cement, emulsions, cutback, shingles, roofing, modified roofing membranes, standard roofing felts), market (e.g., construction, nonconstruction) and US region. The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

World Windows & Doors
This study analyzes the world window and door industry. It presents historical demand data for the years 2000, 2005 and 2010, and forecasts for 2015 and 2020 by product (wood, metal, plastic), market (residential, nonresidential), world region and major country. The study also considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

Windows & Doors in China
Demand for windows and doors in China is forecast to rise 7.7 percent annually through 2014. Doors is the smaller segment but will slightly outpace windows. Among materials, plastic and wood will outpace metal. The nonresidential market will grow faster than the residential segment. This study analyzes the 251 billion yuan window and door industry in China. It presents historical demand data and forecasts for 2014 and 2019 by window and door material, market and region. The study also evaluates company market share and profiles industry participants.

World Plastic Pipe
World plastic pipe demand is forecast to increase 7.3 percent annually through 2015. More than two-thirds of all gains will be attributable to the Asia/Pacific region, although the North American market will grow at the same pace as plastic pipe sales in the US recover rapidly. HDPE and smaller-volume plastic pipe will outpace PVC. This study analyzes the 15.8 million metric ton world plastic pipe industry, with forecasts for 2015 and 2020 by resin, world region and for 39 countries. The study also evaluates company market share and profiles industry participants.

Precast Concrete Products
US demand for precast concrete products is forecast to rise 6.1 percent annually through 2015. Residential building will be the fastest growing market, led by foundations, basement walls and floors. Architectural components will be the fastest growing products, spurred by decorative facades, door and window surrounds and siding. This study analyzes the $8.4 billion US precast concrete products industry, with forecasts for 2015 and 2020 by product, market and region. The study also evaluates company market share and profiles 34 industry competitors.