
An Update on the Transport Infrastructure Development in China (2012)

November 2012

Li & Fung Research Centre



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I. Overview

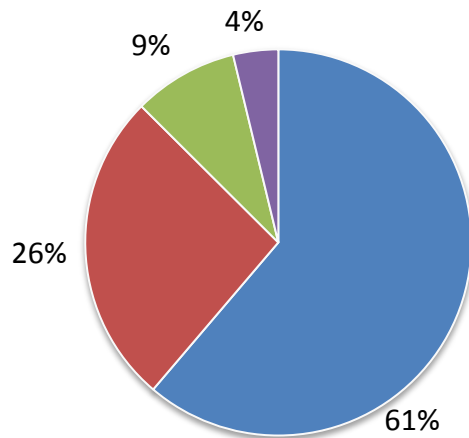
II. Four transportation modes

III. Government Policies

I. OVERVIEW

Latest development of transport infrastructure

Fixed Assets Investment, 2011



■ Highway ■ Railway ■ Water ■ Air

	Share of total (%)	Year-on-year (yoy) growth (%)
Highway	61.2	9.8
Railway	26.2	-22.5
Water	8.8	-0.8
Air	3.8	0.3
Total	100	-2.2

Source: National Bureau of Statistics of China

- To boost economic growth, China has massively invested in transport infrastructure in recent years. Fixed assets investment in the four major modes of transportation (road, railway, water and air) amounted to 2,200 billion yuan in 2011.
- Highway alone accounted for more than half of the total fixed assets investment in the four major modes of transportation, indicating the importance of road transportation in the development of transport infrastructure in China.
- Among all, investment in railway in 2011 dropped the most, owing to the slowdown in high speed railway (HSR)* construction projects in China. The railway market has been facing funding shortages due to uncertain policy and credit curbs, particularly after the fatal Wenzhou accident in July 2011. Nonetheless, China's Ministry of Railways (MOR) announced plans to increase spending on railways in 2012.

** High speed railway in general refers to railway operating at a speed of over 200km per hour.*

Passenger traffic volume

Passenger traffic in China, 2011

Mode of transport	Total passenger traffic (million persons)	
	2011	yoy growth (%)
Road	32,862	7.6
Railway	1,862	11.1
Water	246	9.7
Air	293	9.5

Source: National Bureau of Statistics of China

- The passenger traffic of the four major modes of transportation recorded steady increases in 2011.
- Road remained the major mode of passenger transportation in China. In 2011, China's highways carried 33 billion passengers, up by 7.6% year-on-year (yoy).
- HSR construction projects are back on track in 2012. It is foreseeable that more and more passengers will travel by the HSR, as the railway traffic provides convenient, on-time and cost-effective services.
- It is also expected that air transport, especially the short haul traffic market (distance <1,000km), will face increasing competition from the HSR.

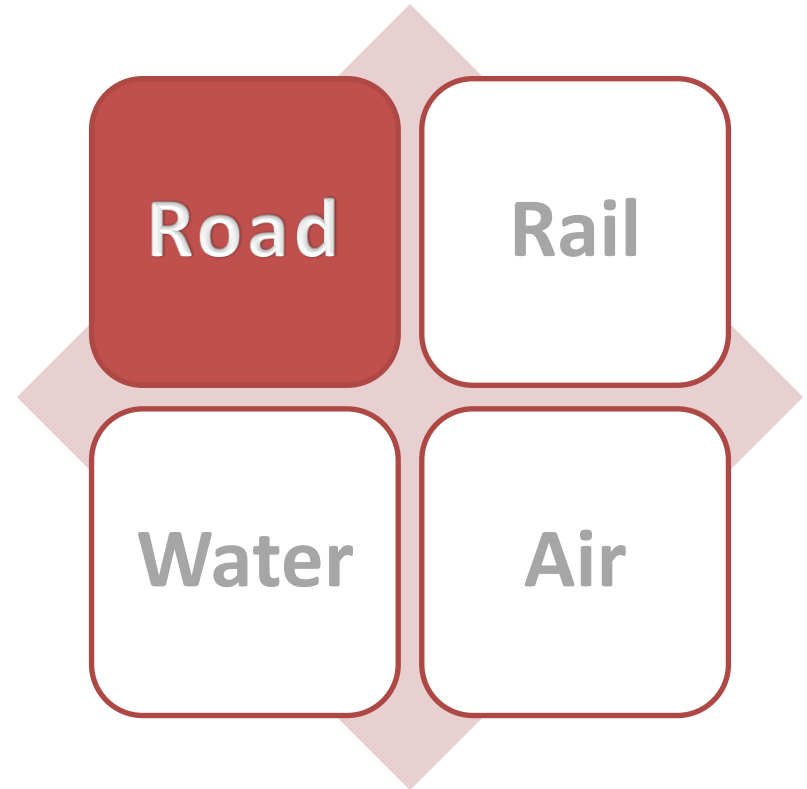
Freight traffic volume

Freight traffic in China, 2011

Mode of transport	Total freight traffic (million tonnes)	
	2011	yoy growth (%)
Road	28,201	15.2
Railway	3,933	8.0
Water	4,260	12.4
Air	5.6	-0.1

Source: National Bureau of Statistics of China

- The freight traffic of the four major modes of transportation recorded healthy growth in 2011, except for air cargo services, which suffered significantly from the global economic downturn.
- Road remained the major mode of freight transportation in China. In 2011, more than 28 billion tonnes of cargo were dispatched by road, up by 15.2% yoy.
- Rail freight traffic grew by 8% yoy in 2011. Healthy growth in coming years is expected, as the completion of certain passenger HSR routes will free up the existing tracks for the use of dedicated freight-handling lines.



II. FOUR TRANSPORTATION MODES

Length in Operation

Total length of highway and expressway in operation in China, 2007-2011

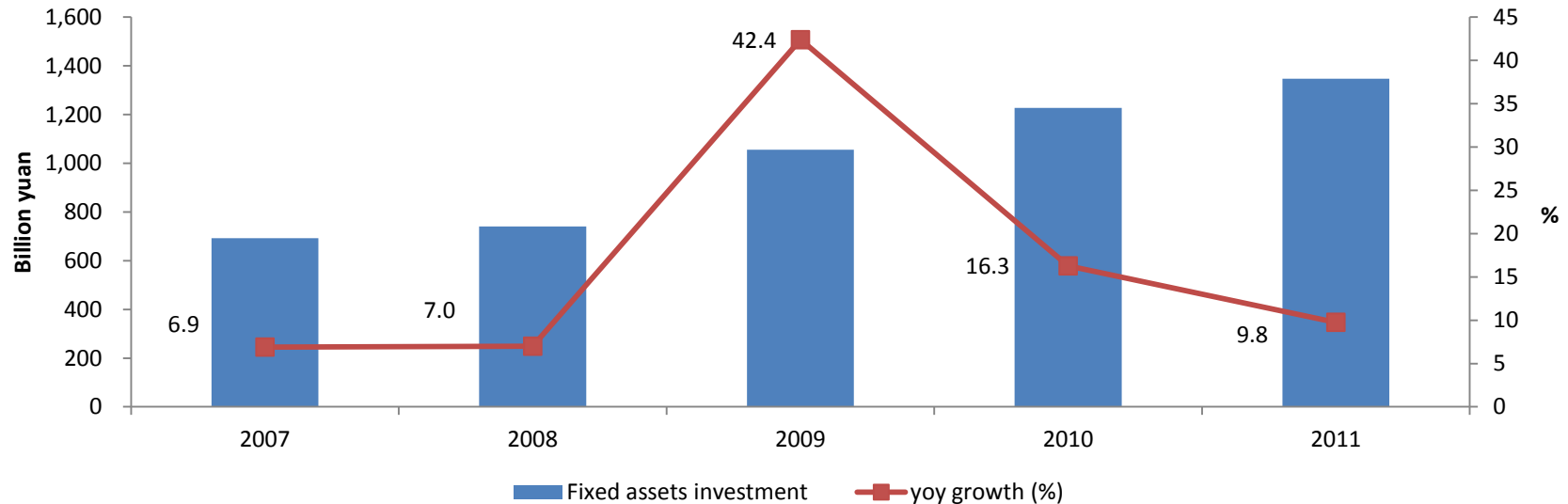
	2007	2008	2009	2010	2011
Highway in operation ('000 km)	3,583.7	3,730.2	3,860.8	4,008.2	4,106.4
yoy growth (%)	3.7	4.1	3.5	3.8	2.4
- Expressway in operation ('000 km)	53.9	60.3	65.1	74.1	84.9
- yoy growth (%)	19	11.9	8.0	13.8	14.6
Highway density (km/100 sq. km)	37.3	38.9	40.2	41.8	42.8
yoy growth (%)	3.6	4.3	3.3	4.0	2.4

Source: Ministry of Transport and National Bureau of Statistics of China

- In 2011, the total length of highway in operation in China reached 4.1 million km, up by 2.4% yoy, among which expressway amounted to 84,900 km.
- According to the Ministry of Transport (MOT), the highway density was 42.8 km/100 sq. km in 2011, up by 1km/ 100 sq. km when compared to year 2010.

Fixed assets investment

Fixed assets investment in highway, 2007-2011



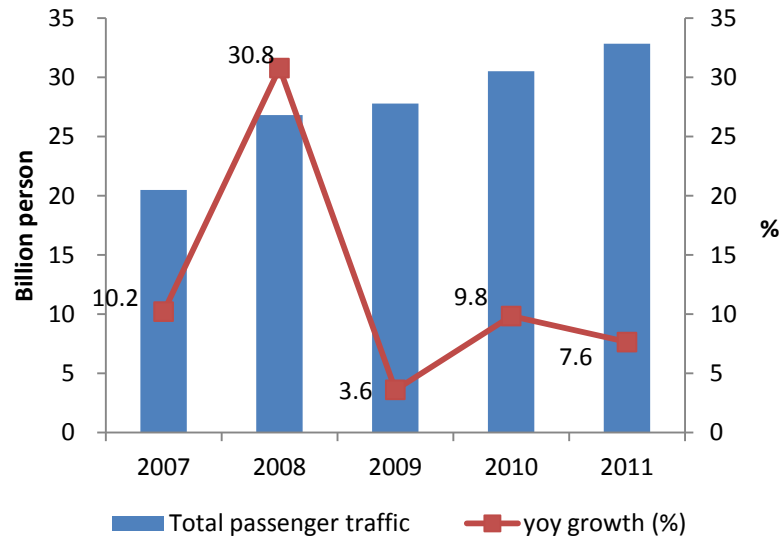
Source: National Bureau of Statistics of China

- Fixed assets investment in highway was 1,347 billion yuan in 2011, increased by 9.8% yoy.
- The increases in 2009 and 2010 were largely attributed to the long-term impact of the 4-trillion-yuan stimulus package adopted in 2008.

(Amid the global financial crisis in 2008, the Chinese government in November 2008 announced to implement a 4-trillion-yuan stimulus package to help stimulate the domestic economy; of which, 1.5 trillion yuan has been allocated for transport infrastructure projects.)

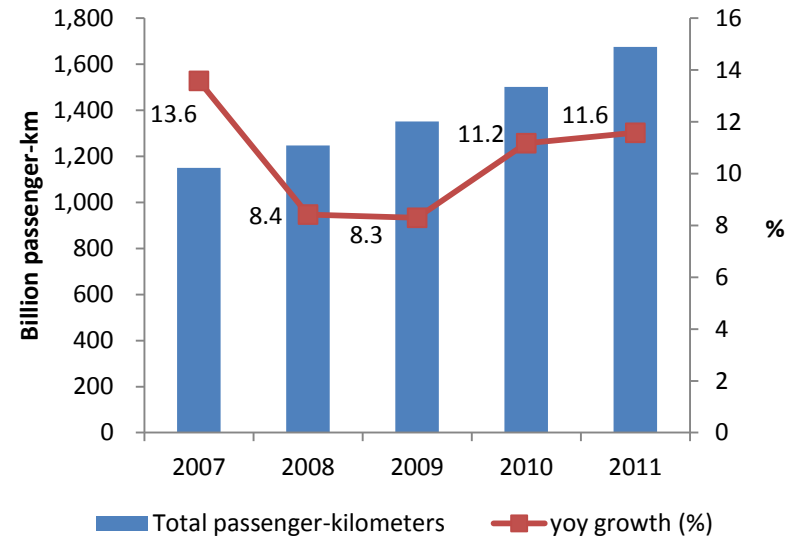
Passenger traffic

Total highway passenger traffic in China, 2007-2011



Source: National Bureau of Statistics of China

Total highway passenger-kilometers in China, 2007-2011



Source: National Bureau of Statistics of China

- According to the National Bureau of Statistics of China (NBS), China's highways carried a total of 33 billion passengers in 2011, up by 7.6% yoy.
- In the same year, the total highway passenger-kilometers rose by 11.6% yoy to 1,676 billion passenger-km.

Passenger traffic (Cont'd)

The top 5 provinces/ municipalities in terms of highway passenger traffic in China, 2010-11 (million passengers)

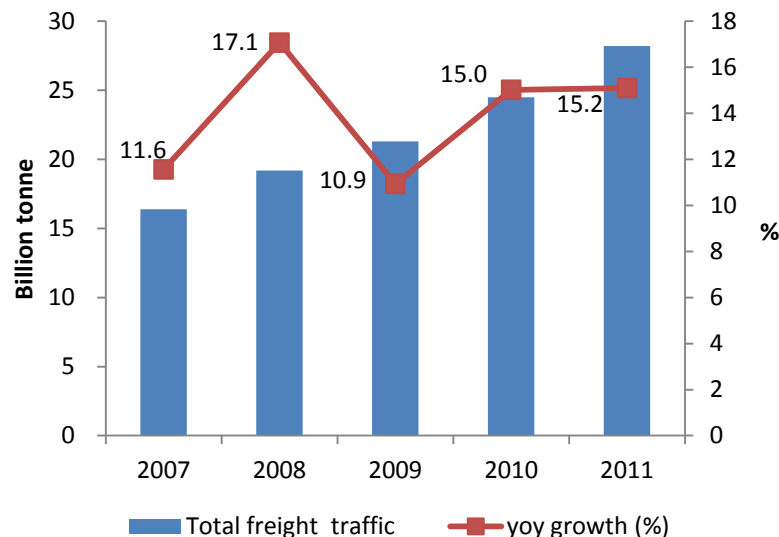
Province/ Municipality	2010	2011	yoy growth (%)
Guangdong	4,422	4,936	11.6
Sichuan	2,310	2,426	5.0
Shandong	2,400	2,415	0.6
Jiangsu	2,159	2,357	9.2
Zhejiang	2,157	2,184	1.3

Source: National Bureau of Statistics of China; China Statistical Abstract

- Among all the provinces and municipalities in China, Guangdong registered the highest highway passenger traffic, with nearly 5 billion passengers in 2011, up by 11.6% yoy.
- Sichuan ranked second in terms of highway passenger traffic and amounted to 2.4 billion passengers in 2011.

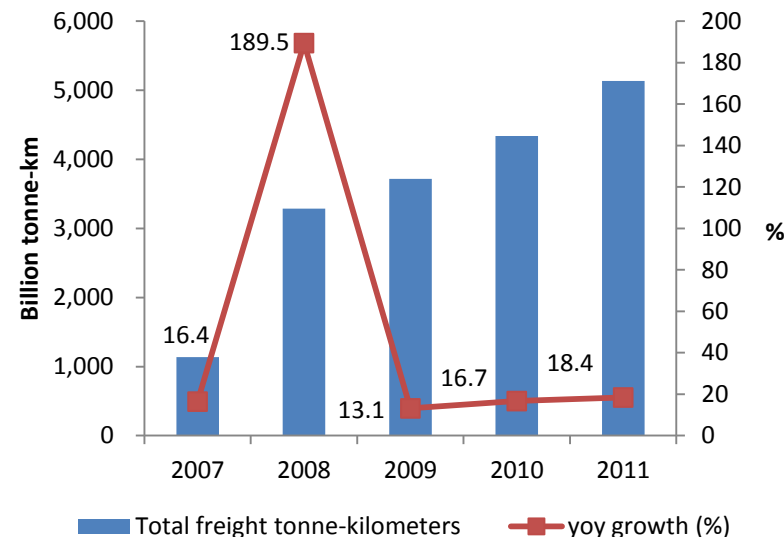
Freight traffic

Total highway freight traffic in China, 2007-2011



Source: National Bureau of Statistics of China

Total highway freight tonne-kilometers in China, 2007-2011



Source: National Bureau of Statistics of China

- The volume of freight dispatched by highway in China amounted to 28 billion tonnes in 2010, posting a yoy growth of 15.1%.
- The total highway freight tonne-kilometers climbed by 18.4% yoy to reach 5,138 billion tonne-kilometers in 2011.

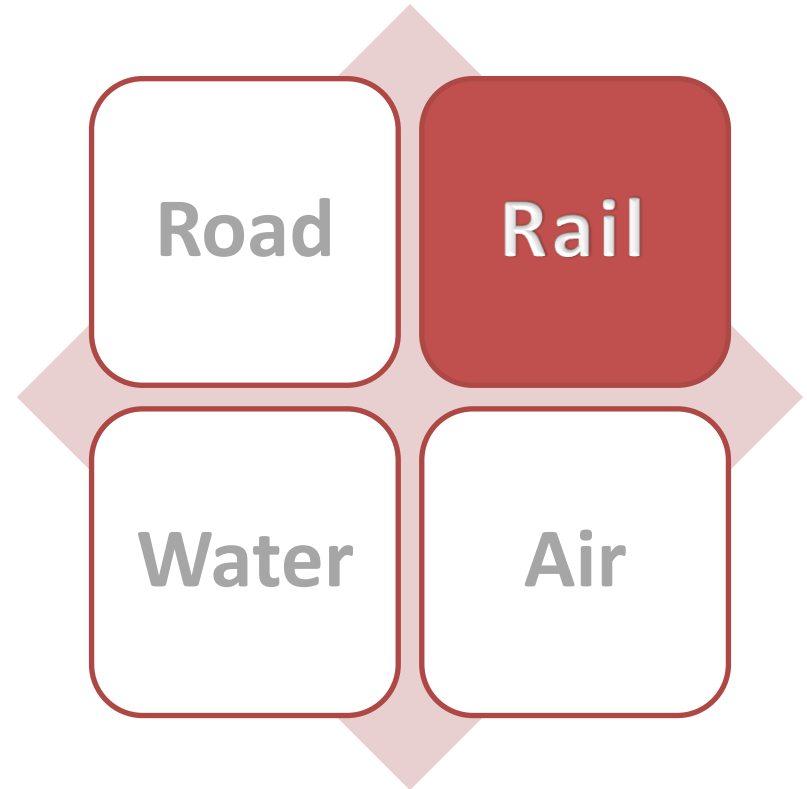
Freight traffic (Cont'd)

The top 5 provinces/ municipalities in terms of highway freight traffic in China, 2010-2011 (million tonnes)

Province/ Municipality	2010	2011	yoy growth (%)
Shandong	2,644	2,794	5.7
Henan	1,833	2,201	20.1
Anhui	1,837	2,195	19.5
Hebei	1,359	1,667	22.6
Guangdong	1,407	1,666	18.4

Source: National Bureau of Statistics of China; China Statistical Abstract

- Among all the provinces and municipalities in China, Shandong recorded the highest highway freight traffic, with nearly 2.8 billion tonnes in 2011, up by 5.7% yoy.
- The level of highway freight traffic in Henan was the second highest in China, followed by Anhui.

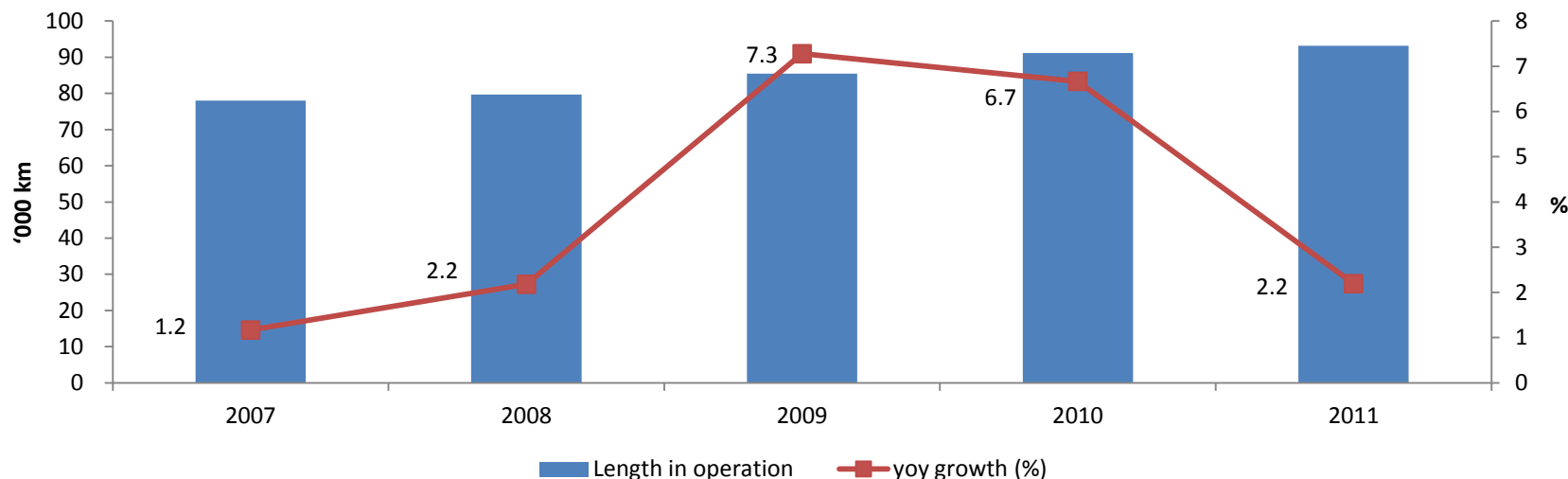


II. FOUR TRANSPORTATION MODES

Length in Operation



Total length of railway in operation in China, 2007-2011 ('000 km)

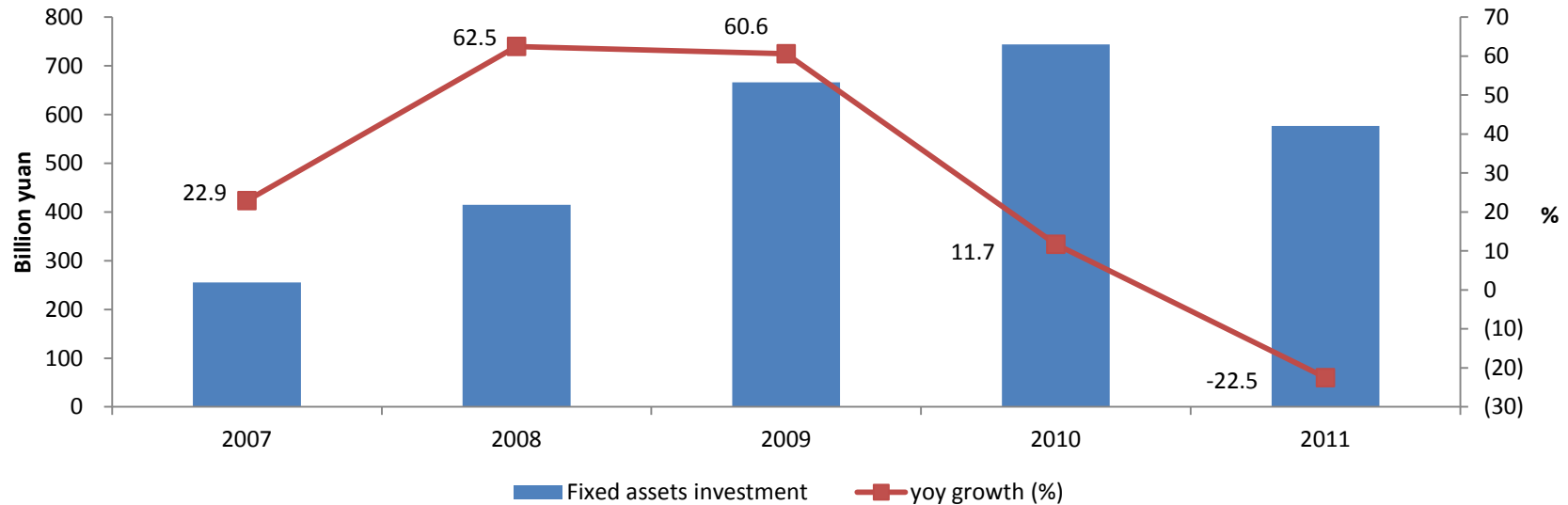


Source: Ministry of Transport and National Bureau of Statistics of China

- China ranked second in the world, only after the US, in terms of length of railways in operation. China's total length of railways in operation was 93,000 km in 2011, posting an increase of 2.2% yoy.
- The structure of the railway network has also improved. According to the MOR, 49.4% of the railways were electrified and 42.4% were double tracking in 2011. In addition, the railway density was 97.1 km/ 10,000 sq. km in 2011, increased from 95.0 km/ 10,000 sq. km in the previous year.

Fixed assets investment

Fixed assets investment in railway, 2007-2011

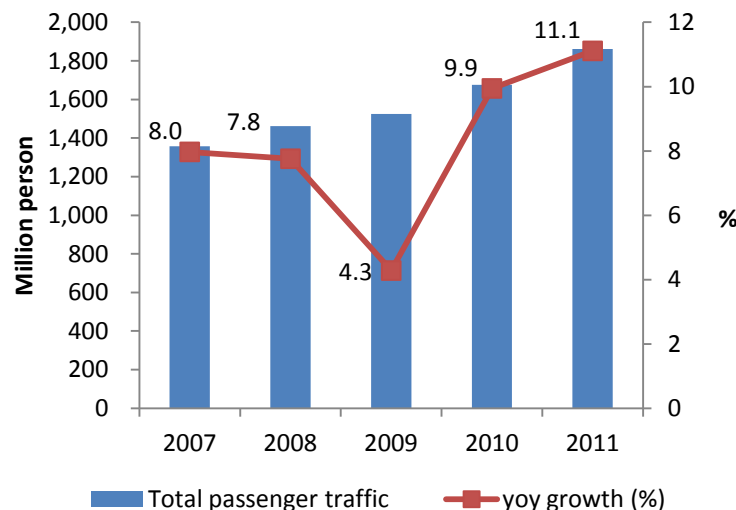


Source: National Bureau of Statistics of China

- In 2011, fixed assets investment in railway amounted to 577 billion yuan, posting a yoy drop of 22.5%. The reduction was mainly due to the slowdown in HSR construction projects in China. The railway market has been facing funding shortages due to uncertain policy and credit curbs, particularly after the fatal Wenzhou accident in July 2011.

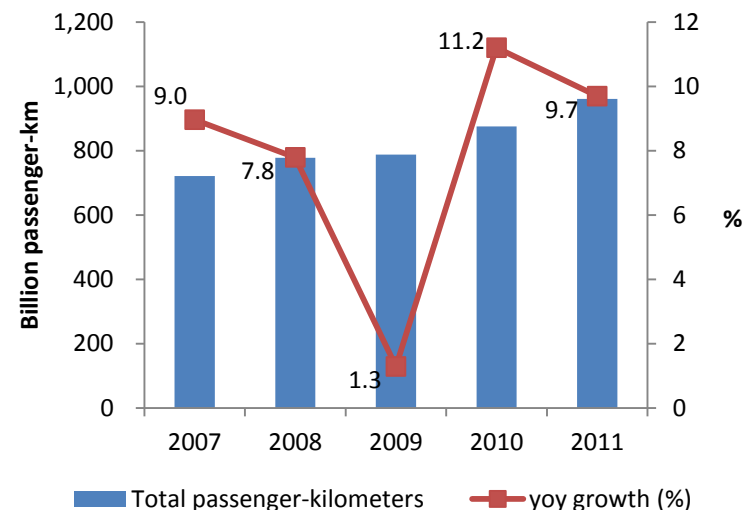
Passenger traffic

Total railway passenger traffic in China, 2007-2011



Source: National Bureau of Statistics of China

Total railway passenger-kilometers in China, 2007-2011



Source: National Bureau of Statistics of China

- Railway carried a total of 1,862 million passengers in 2011, up by 11.1% yoy.
- The passenger-kilometers of railways posted a yoy growth of 9.7% to 961 billion passenger-kilometers in 2011.

Passenger traffic (Cont'd)

Railway passenger traffic by region, 2010-2011 (million passengers)

Regions in China	2010	2011	yoy growth (%)
Eastern (Shanghai, Jiangsu, Zhejiang, Anhui, Fujian, Jiangxi, Shandong)	454	498	9.9
Central & Southern (Henan, Hubei, Hunan, Guangdong, Guangxi, Hainan)	365	428	17.4
Northern (Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia)	290	307	5.6
Northeastern (Liaoning, Jilin, Heilongjiang)	297	289	-2.6
Southwestern (Chongqing, Sichuan, Guizhou, Yunnan, Tibet)	168	229	36.1
Northwestern (Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang)	102	111	8.5

Source: National Bureau of Statistics of China; China Statistical Abstract

- Among all the regions in China, eastern China registered the highest railway passenger traffic, with 498 million persons in 2011, up by 9.9% yoy.
- In the same year, southwestern China recorded the highest growth rate in passenger traffic (36.1% yoy) among all the regions.

Passenger traffic (Cont'd)

The five busiest railway lines for passenger traffic in China, 2009-2010
(million passengers)

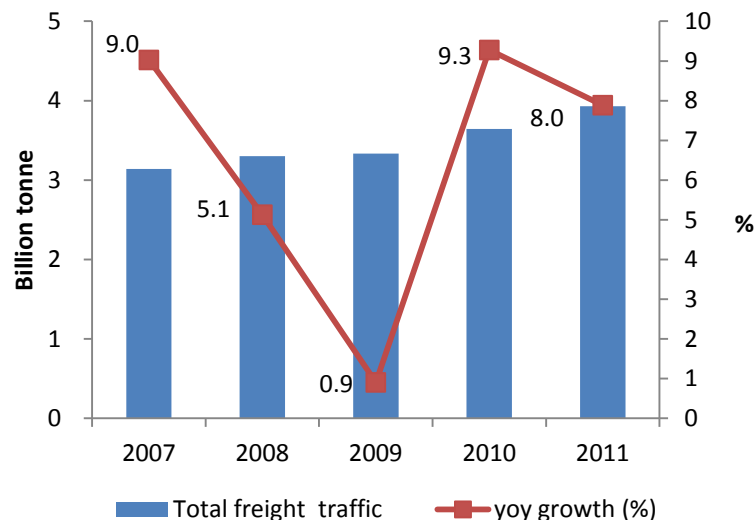
Railway lines	2009	2010	yoy growth (%)
Beijing-Guangzhou	146.1	149.7	2.4
Beijing-Shanghai	143.1	124.8	-12.8
Lianyungang-Lanzhou	86.1	93.3	8.4
Beijing-Harbin	72.4	76.6	5.8
Shanghai-Kunming	83.5	73.4	-12.1

Source: National Bureau of Statistics of China

- In 2010, Beijing-Guangzhou was the busiest passenger railway line carrying 149.7 million persons, with a steady yoy growth of 2.4%.
- Beijing-Shanghai line was the second busiest passenger railway line, followed by Lianyungang-Lanzhou and Beijing-Harbin lines.

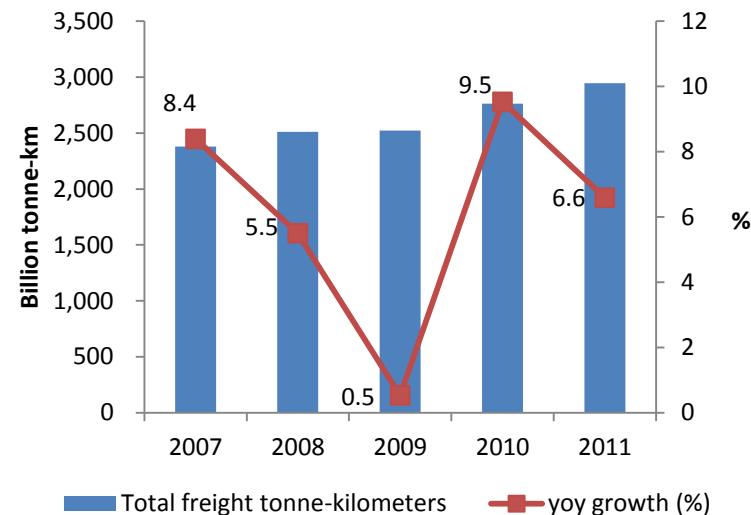
Freight traffic

Total railway freight traffic in China, 2007-2011



Source: National Bureau of Statistics of China

Total railway freight tonne-kilometers in China, 2007-2011



Source: National Bureau of Statistics of China

- The total freight dispatched by railway in China amounted to 3.9 billion tonnes in 2011, up by 7.9% yoy.
- The total railway freight tonne-kilometers rose by 6.6% yoy in 2011, reaching 2,947 billion tonne-kilometers.

Freight traffic (Cont'd)

Railway freight traffic by region, 2010-2011 (million tonnes)

Regions in China	2010	2011	yoy growth (%)
Northern <i>(Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia)</i>	1,429	1,630	14.1
Eastern <i>(Shanghai, Jiangsu, Zhejiang, Anhui, Fujian, Jiangxi, Shandong)</i>	549	589	7.2
Northeastern <i>(Liaoning, Jilin, Heilongjiang)</i>	513	471	-8.1
Northwestern <i>(Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang)</i>	501	550	9.9
Central & Southern <i>(Henan, Hubei, Hunan, Guangdong, Guangxi, Hainan)</i>	453	436	-3.8
Southwestern <i>(Chongqing, Sichuan, Guizhou, Yunnan, Tibet)</i>	239	242	1.4

Source: National Bureau of Statistics of China; China Statistical Abstract

- Northern China ranked first in terms of volume of freight dispatched by railway in 2011. Among all the regions in China, railway freight traffic of northern China registered the fastest growth of 14.1% yoy in 2011.

Freight traffic (Cont'd)

The five busiest railway lines for freight traffic in China, 2009-2010 (million tonnes)

Railway lines	2009	2010	yoy growth (%)
Taiyuan-Datong	124	145	17.2
Baotou-Lanzhou	83	107	29.0
Shanghai-Kunming	88	88	0.2
Lianyuangang-Lanzhou	84	87	4.5
Beijing-Baotou	60	83	38.7

Source: National Bureau of Statistics of China

- Among the major railways in China, the Taiyuan-Datong and Baotou-Lanzhou lines carried the most freight in 2010.
- Beijing-Baotou recorded the highest growth of 38.7% yoy among the top five busiest railway lines for freight traffic in China.

Freight traffic (Cont'd)

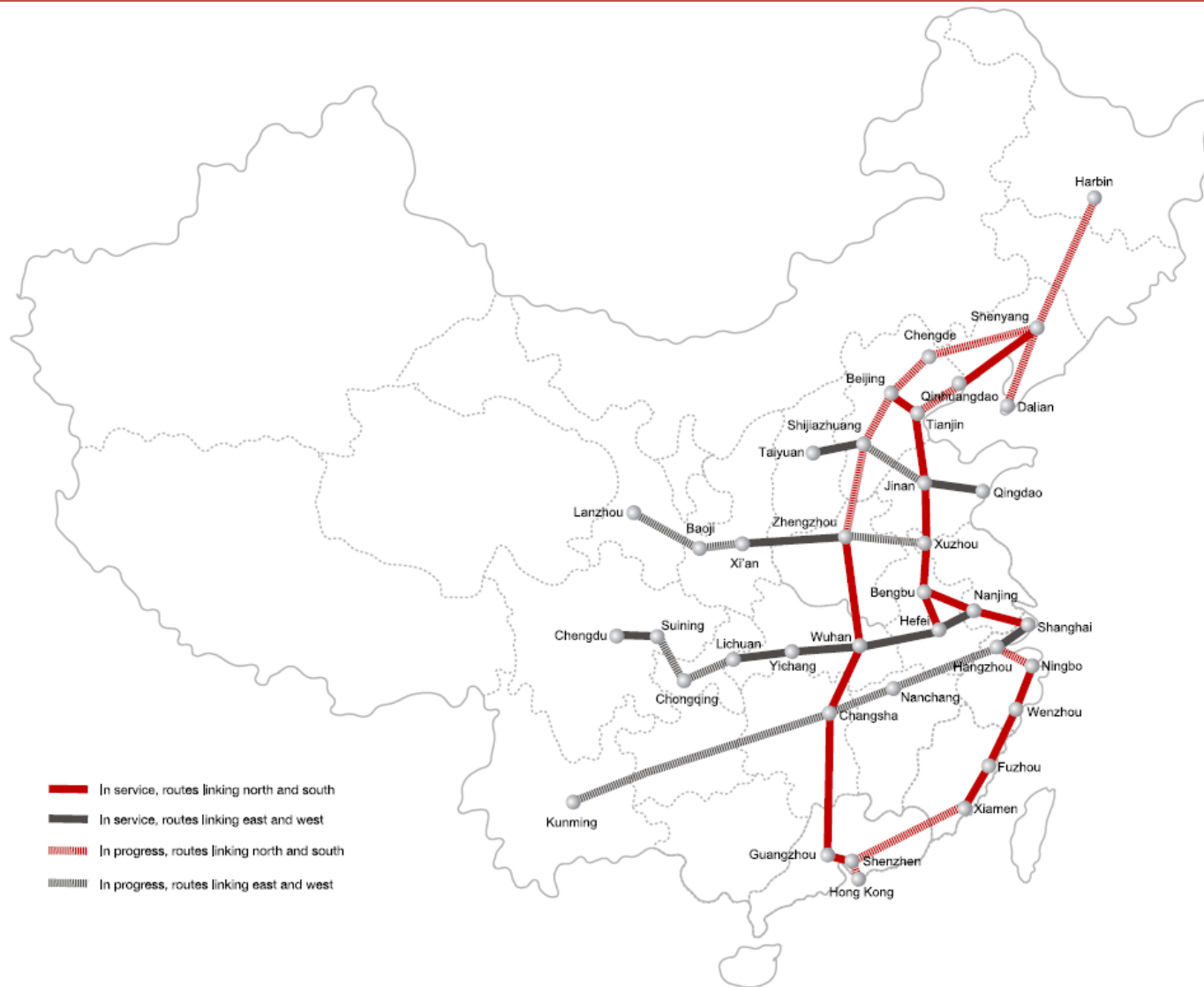
The top five types of products dispatched by railway in China, 2011 (million tonnes)

Products	2011	yoy growth (%)
Coal	2,270	13.5
Smelting materials	870	1.8
Petroleum	136	-2.0
Grain	99	-1.6
Chemical fertilizers and pesticides	87	0.6

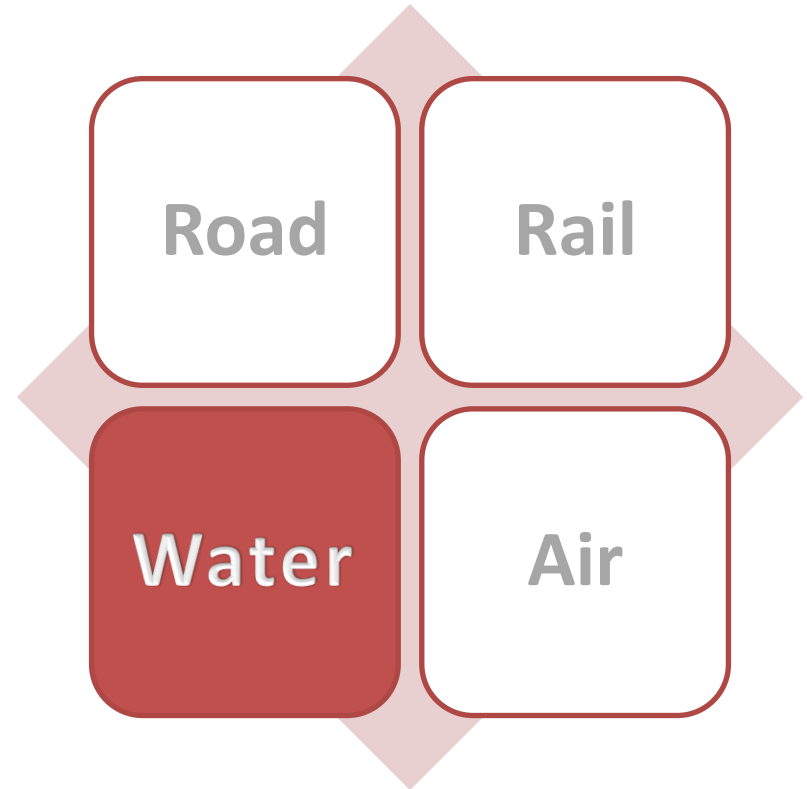
Source: Ministry of Railways

- Coal is the dominant type of product dispatched by railway in China. In 2011, the rail freight traffic volume of coal was 2,270 million tonnes, up by 13.5% yoy.
- Smelting materials and petroleum were other major types of rail freight products. However, summation of their rail freight traffic volume was less than half of the rail freight traffic volume of coal.

Current development of high-speed railway network in China (as of October 2012)*



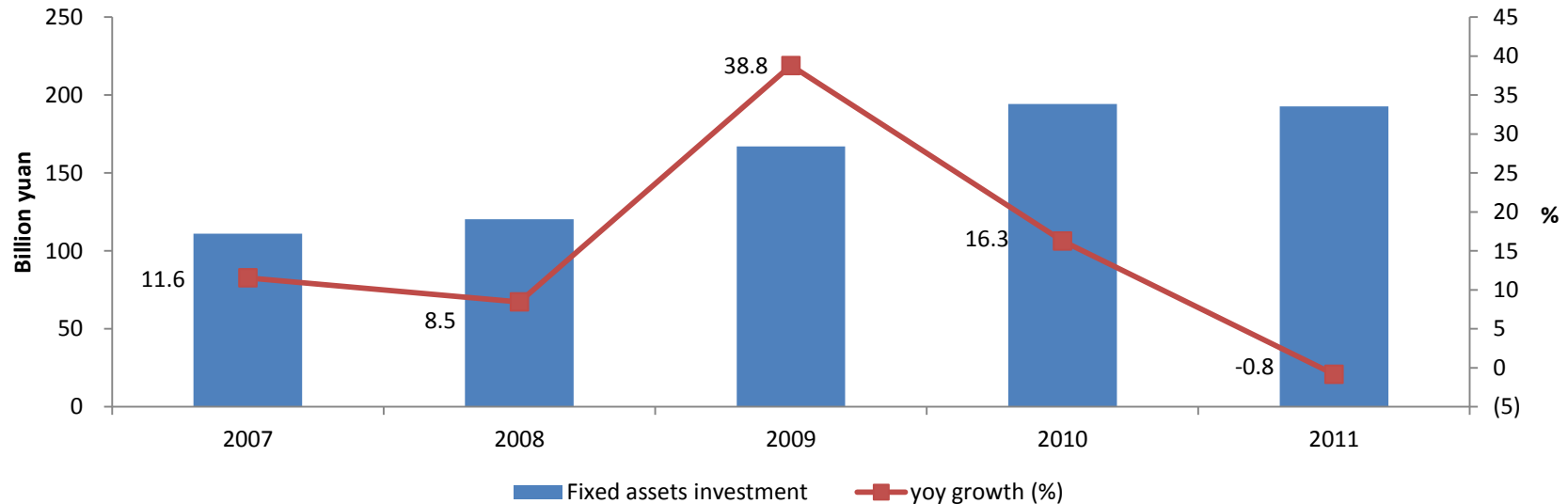
* The exhibit covers eight high-speed railway routes in China, of which, four routes connecting north and south and the other four linking east and west (四縱四橫).
Source: Compiled by Li & Fung Research Centre



II. FOUR TRANSPORTATION MODES

Fixed assets investment

Fixed assets investment in waterway, 2007-2011



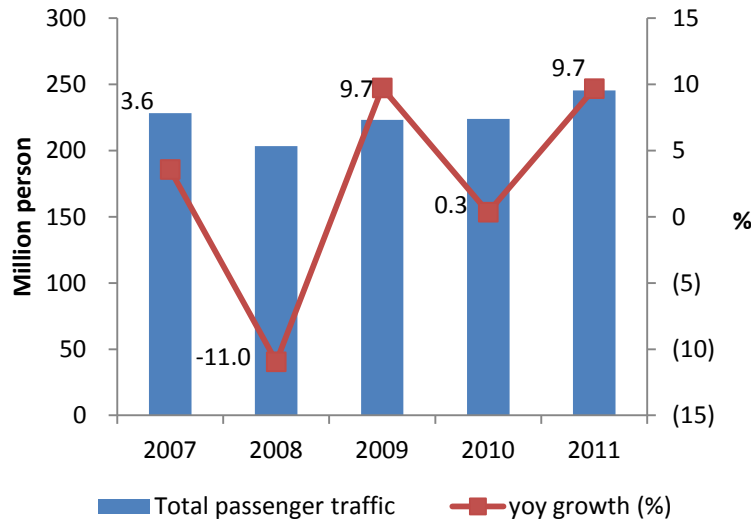
Source: National Bureau of Statistics of China

- Water transportation in China could be generally categorized under “ports” and “inland waterways”. As of end 2011, there were 31,968 coastal and inland berths in China. There were 124,600 kilometers of navigable inland waterway by end 2011, among which 50.3% were standard waterways*.
- In 2011, the fixed assets investment in water transportation was 193 billion yuan, posting a drop of 0.8%. The increases in 2009 and 2010 were largely attributed to the long-term impact of the 4-trillion-yuan stimulus package adopted in 2008.

* China's navigable inland waterways are classified into standard waterways and non-standard waterways according to a set of criteria including capacity of the waterways and size of vessels passing through the waterways. Standard waterways are further divided into seven classes. Among the seven classes, the top 4 classes (classes I to IV) are high-class waterways.

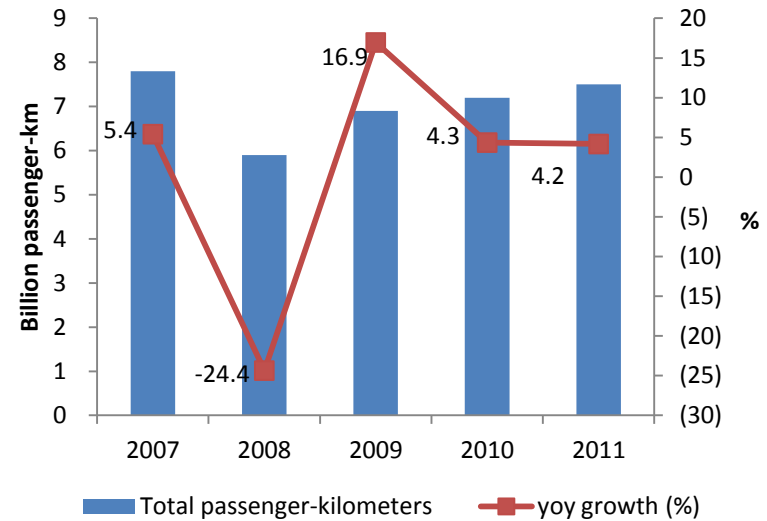
Passenger traffic

Total waterway passenger traffic in China, 2007-2011



Source: National Bureau of Statistics of China

Total waterway passenger-kilometers in China, 2007-2011



Source: National Bureau of Statistics of China

- According to the NBS, China's waterway carried a total of 246 million passengers in 2011, maintaining a yoy growth of 9.7%.
- The total waterway passenger-km increased by 4.2% yoy to 7.5 billion passenger-km in the same year.

Passenger traffic (Cont'd)

The top 5 provinces/ municipalities in terms of waterway passenger traffic in China, 2010-2011 (million passengers)

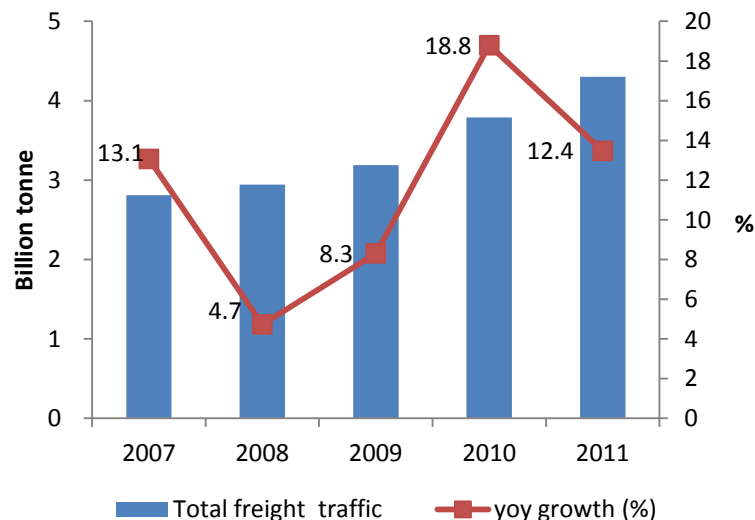
Province/ Municipality	2010	2011	yoy growth (%)
Zhejiang	31.6	34.7	9.9
Sichuan	27.3	30.8	12.8
Guangdong	22.4	25.9	15.8
Shandong	26.4	24.0	-8.8
Guizhou	19.3	21.9	13.3

Source: National Bureau of Statistics of China; China Statistical Abstract

- Zhejiang's waterway carried a total of 34.7 million passengers in 2011. The waterway passenger traffic of Zhejiang ranked first among all the provinces and municipalities in China.
- Among the top five provinces/ municipalities in terms of the waterway passenger traffic in China, Shandong was the only province that posted a negative yoy growth (-8.8%) in 2011.

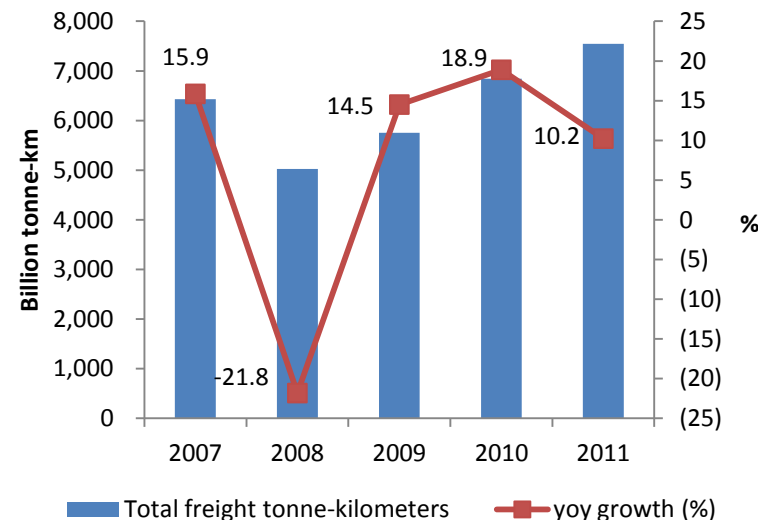
Freight traffic

Total waterway freight traffic in China, 2007-2011



Source: National Bureau of Statistics of China

Total waterway freight tonne-kilometers in China, 2007-2011



Source: National Bureau of Statistics of China

- Waterway freight traffic was 4.3 billion tonnes in 2011, up by 13.5% yoy.
- The total waterway freight tonne-km climbed by 10.2% yoy to 7,542 billion tonne-km in the same year.

Freight traffic (Cont'd)

The top five types of products dispatched by coastal ports above designated size, 2011 (million tonnes)

Products	2011	yoy growth (%)	Share of total (%)
Coal and related products	1,943	18.0	21.3
Metal ores	1,385	9.7	15.2
Building materials made from mineral ores	1,357	12.7	14.9
Petroleum and natural gas and related products	748	5.1	8.2
Iron and steel	419	7.2	4.6

Source: Ministry of Transport

- Coal & related products accounted for over one-fifth of the total freight traffic dispatched by coastal ports above designated size in 2011.
- Metal ores, building materials made from mineral ores, petroleum and natural gas and related products, iron and steel accounted for 15.2%, 14.9%, 8.2% and 4.6% of the total freight traffic, respectively.
- The total traffic volume of the top five types of products accounted for 64.2% of the total freight traffic dispatched by waterway.

Freight traffic (Cont'd)

The top 10 coastal ports above designated size in terms of freight volume in China

Rank in 2011	Rank in 2010	Coastal Port	Freight volume in 2011 (million tonnes)	yoy growth (%)
1	1	Ningbo-Zhoushan	693.9	9.6
2	2	Shanghai	624.3	10.8
3	3	Tianjin	453.4	9.7
4	4	Guangzhou	431.5	5.0
5	5	Qingdao	372.3	6.3
6	6	Dalian	336.9	7.3
7	7	Qinhuangdao	287.7	9.4
8	9	Yingkou	260.9	15.5
9	8	Rizhao	252.6	11.8
10	10	Shenzhen	223.3	1.0

Source: China Statistical Abstract

- In 2011, Ningbo-Zhoushan ranked as the busiest coastal port in terms of freight volume in China.
- Yingkou overtook Rizhao and became the 8th busiest coastal port in 2011. Yingkou also recorded the highest annual growth rate in terms of freight volume, among the top ten coastal ports above designated size in China.

Container throughput

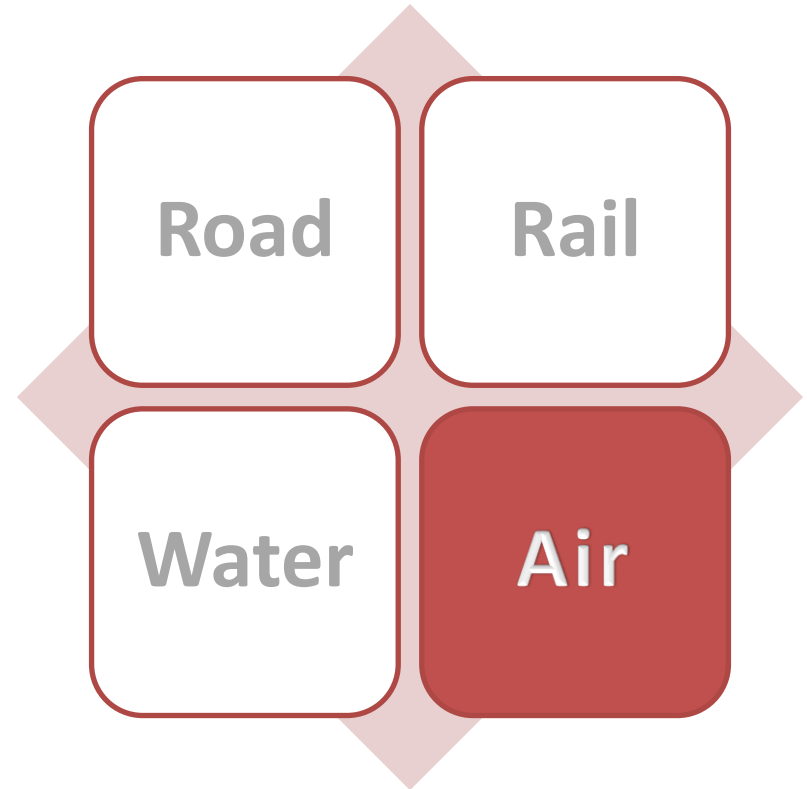


The top 20 ports handling the largest container throughput in the world, 2011

Rank in 2011	Rank in 2010	Port	Million TEU	yoy growth (%)	Rank in 2011	Rank in 2010	Port	Million TEU	yoy growth (%)
1	1	Shanghai *	31.7	9.2	11	11	Tianjin*	11.6	15.0
2	2	Singapore	29.9	5.3	12	12	Kaohsiung	9.6	5.0
3	3	Hong Kong	24.4	2.9	13	13	Port Kelang	9.6	8.2
4	4	Shenzhen *	22.6	0.3	14	15	Hamburg	9.0	14.3
5	5	Busan	16.2	14.0	15	14	Antwerp	8.7	2.2
6	6	Ningbo-Zhoushan *	14.7	12.0	16	17	Los Angeles	7.9	1.4
7	7	Guangzhou Harbor *	14.3	13.6	17	-	Keihin Ports	7.6	2.1
8	8	Qingdao *	13.0	8.4	18	16	Tanjung Pelepas	7.5	15.9
9	9	Dubai	13.0	12.2	19	19	Xiamen*	6.5	11.2
10	10	Rotterdam	11.9	6.6	20	-	Dalian*	6.4	22.1

**Note: Ports in the Mainland China
Source: World Shipping Council*

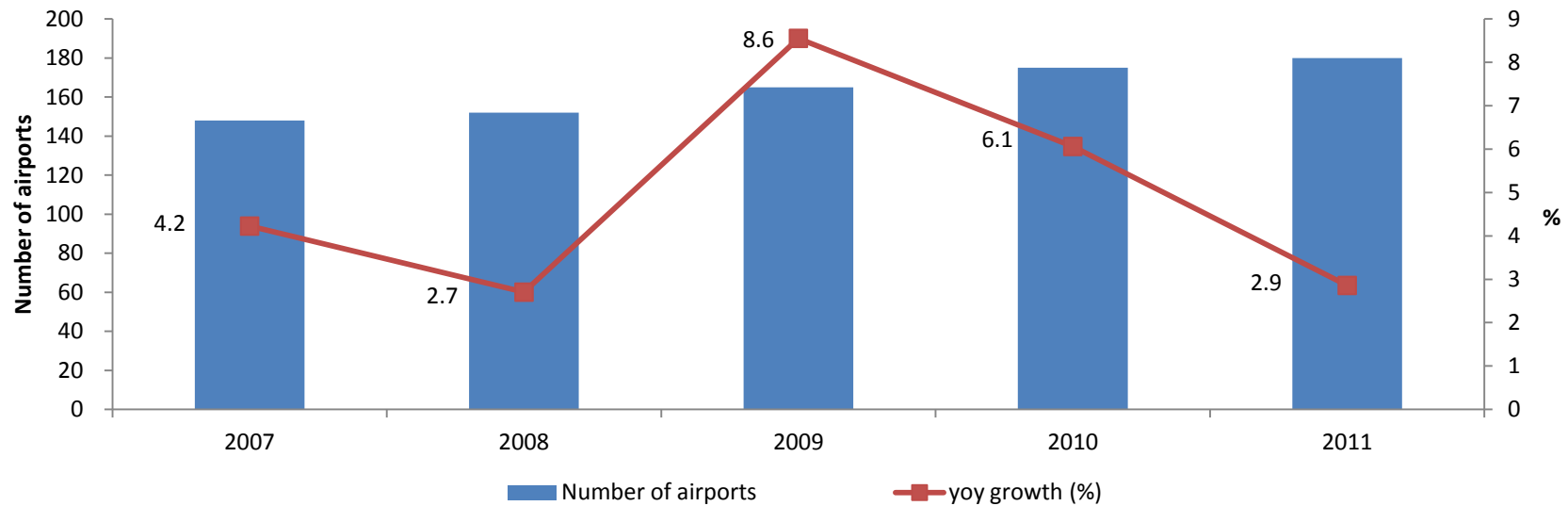
- The total container throughput by container port in China amounted to 164 million TEU in 2011, up by 12% yoy.
- Eight out of the world's top 20 ports are located in China.
- Shanghai was the world's largest container terminal in 2011, handling 31.7 million TEU.
- Shenzhen, the second largest container terminal in China, ranked the world's fourth largest container terminal with total throughput of 22.6 million TEU in 2011.



II. FOUR TRANSPORTATION MODES

Number of civil airports

Number of civil airports in China, 2007-2011

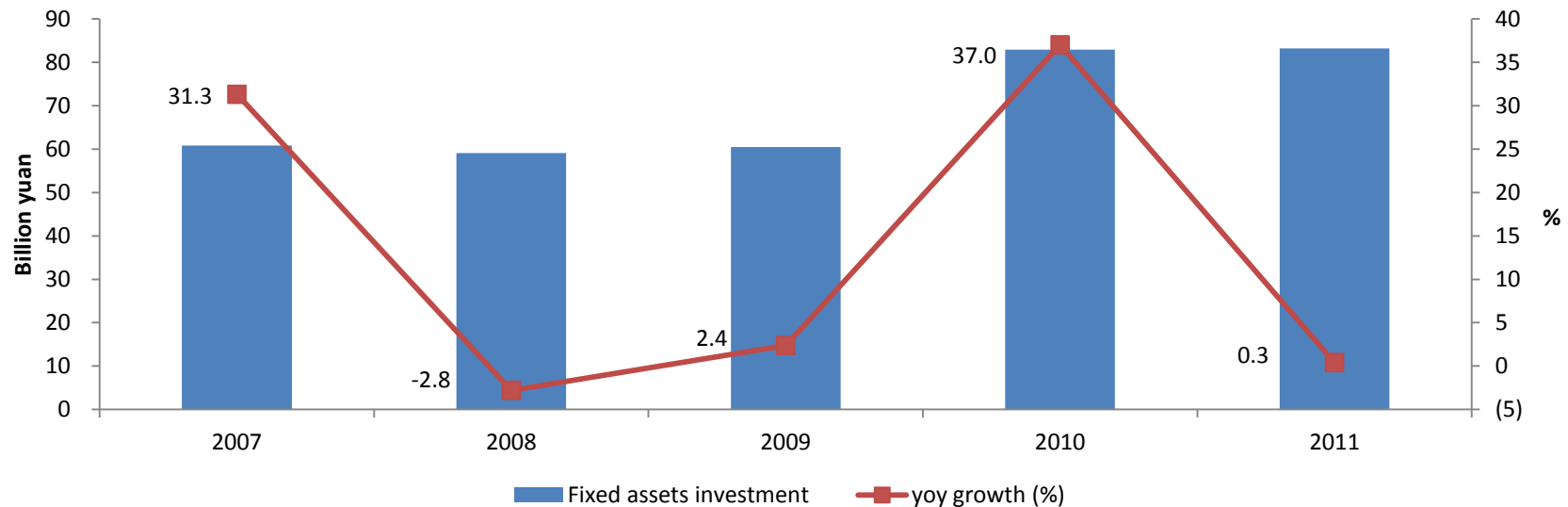


Sources: National Bureau of Statistics of China; the General Administration of Civil Aviation of China

- According to the General Administration of Civil Aviation of China (CAAC), there were 180 civil airports in China in 2011, up from 175 in 2010.

Fixed assets investment

Fixed assets investment in air transportation, 2007-2011

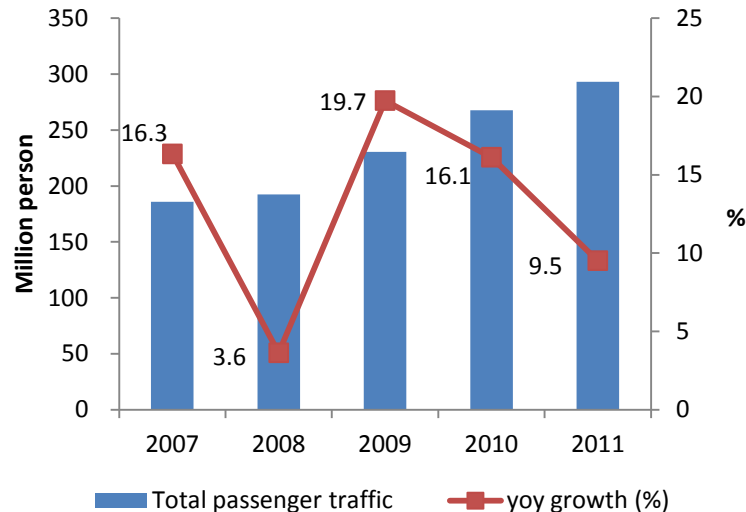


Source: National Bureau of Statistics of China

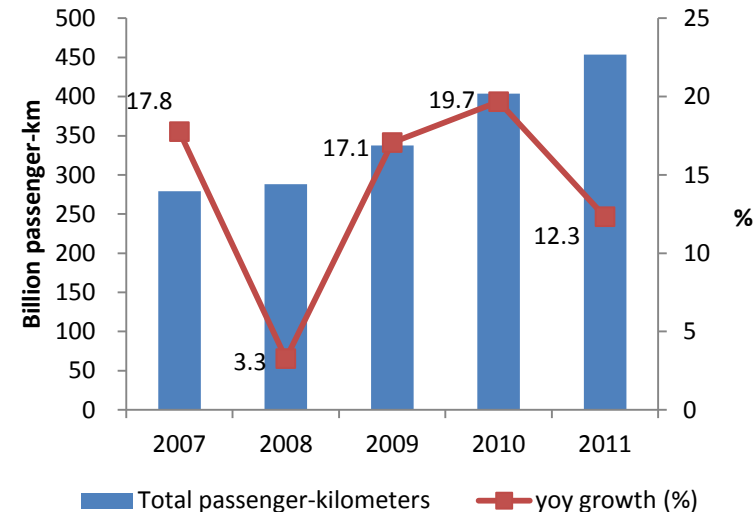
- The fixed assets investment in air transportation rose by 0.4% yoy to reach 83.2 billion yuan in 2011.

Passenger traffic

Total air passenger traffic in China, 2007-2011



Total air passenger-kilometers in China, 2007-2011



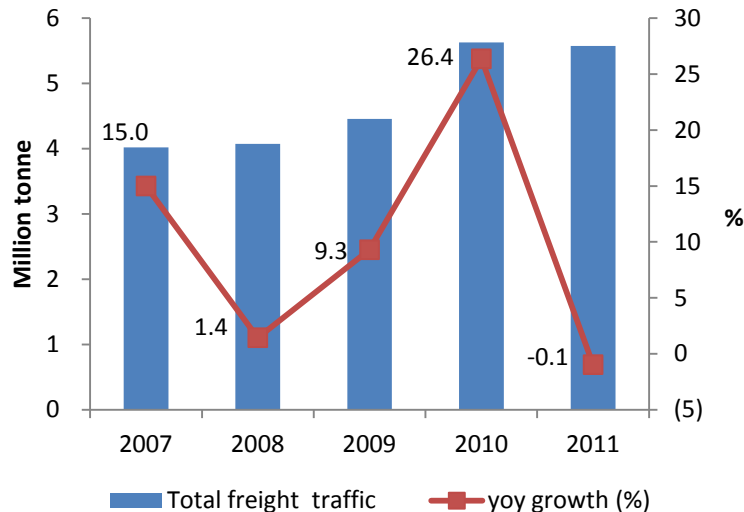
Source: National Bureau of Statistics of China

Note: Passenger traffic and passenger-kilometers refer to the passengers handled by Mainland-based carriers.

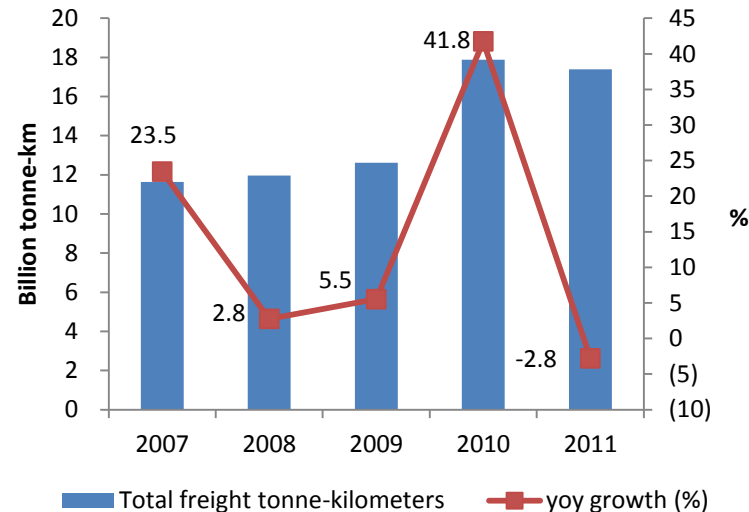
- The total air passenger traffic in China rose by 9.5% yoy in 2011 to 293 million persons.
- Air passenger traffic of domestic routes accounted for 92.8% of the total, increased by 9.5% yoy to 272 million persons in 2011. Of which, air passenger traffic of Hong Kong, Macau and Taiwan routes recorded 7.6 million persons, up by 13.1% yoy. Air passenger traffic of international routes climbed by 9.7% yoy to reach 21 million persons in 2011.
- The total air passenger-kilometers in 2011 reached 453.7 billion passenger-kilometers, increased by 12.3% yoy.

Freight traffic

Total air freight traffic in China, 2007-2011



Total air freight tonne-kilometers in China, 2007-2011



Source: National Bureau of Statistics of China

Note: Freight traffic and freight tonne-kilometers refer to the freights handled by Mainland-based carriers.

- The total air freight traffic in China was 5.6 million tonnes, posting a yoy drop of 1%. Domestic air freight accounted for 68% of the total, increased by 2.4% yoy to 3.8 million tonnes in 2011. Of which, air freight traffic of Hong Kong, Macau and Taiwan routes amounted to 0.21 million tonnes, dropped by 3.0% yoy.
- Affected by the global economic downturn, international air freight traffic reduced by 7.6% yoy to reach 1.8 million tonnes in 2011.
- The total air freight tonne-kilometers in 2011 were 17.4 billion tonne-kilometers, recorded a yoy drop of 2.8%.

Major airports in China

The top 10 busiest passenger airports in mainland China, 2011

Rank	Airport	Region	Passenger throughput			Freight throughput			Number of flights handled		
			million persons	yoy growth (%)	Share of total (%)	10,000 tonnes	yoy growth (%)	Share of total (%)	10,000 flights	yoy growth (%)	Share of total (%)
1	Beijing Capital	Northern	78.7	6.4	12.7	164.0	5.7	14.2	53.3	3.0	8.9
2	Guangzhou	Central & Southern	45.0	9.9	7.3	118.0	3.1	10.2	34.9	6.1	5.8
3	Shanghai Pudong	Eastern	41.4	2.1	6.7	308.5	-4.4	26.6	34.4	3.6	5.8
4	Shanghai Hongqiao	Eastern	33.1	5.8	5.3	45.4	-5.5	3.9	23.0	5.0	3.8
5	Chengdu	Southwestern	29.1	12.7	4.7	47.8	10.5	4.1	22.2	8.2	3.7
6	Shenzhen	Central & Southern	28.2	5.7	4.6	82.8	2.4	7.2	22.4	3.4	3.7
7	Kunming	Southwestern	22.3	10.3	3.6	27.2	-0.4	2.4	19.2	5.7	3.2
8	Xi'an	Northwestern	21.2	17.5	3.4	17.3	9.2	1.5	18.5	12.6	3.1
9	Chongqing	Southwestern	19.1	20.6	3.1	23.8	21.4	2.1	16.7	14.5	2.8
10	Hangzhou	Eastern	17.5	2.6	2.8	30.6	8.0	2.6	14.9	2.2	2.5

Source: Civil Aviation Administration of China (CAAC)

Note: Passenger throughput and freight throughput refer to the departure/ arrival passenger and loading/ unloading freight handled by airports, respectively.

- In 2011, 53 out of the 180 civil airports handled more than one million passengers, representing 95.2% of the total passenger throughput in China; 21 of them handled more than 10 million passengers, accounting for 75.1% of the total passenger throughput. The top four passenger airports in Beijing Capital, Guangzhou, Shanghai Pudong and Shanghai Hongqiao accounted for 32.0% of the national total.
- As for air freight throughput, 47 out of the 180 civil airports handled more than 10,000 tonnes of goods in 2011, accounting for 98.6% of the total air freight throughput of the year. The top four airports in Beijing Capital, Shanghai Pudong, Guangzhou and Shenzhen accounted for 58.2% of the total.

Global Ranking



The top 20 busiest civil airports in the world in terms of passenger throughput, 2011

Rank	Airport	Country	Passenger throughput (million)	yoy growth (%)	Rank	Airport	Country	Passenger throughput (million)	yoy growth (%)
1	Atlanta	United States	92.4	3.5	11	Denver	United States	52.8	1.7
2	Beijing Capital	China	78.7	6.4	12	Jakarta	Indonesia	51.2	15.4
3	London Heathrow	United Kingdom	69.4	5.4	13	Dubai	United Arab Emirates	51.0	8.0
4	Chicago	United States	66.7	-0.1	14	Amsterdam	Netherlands	49.8	10.0
5	Tokyo Haneda	Japan	62.6	-2.5	15	Madrid	Spain	49.6	-0.4
6	Los Angeles	United States	61.9	4.7	16	Bangkok	Thailand	47.9	12.0
7	Paris	France	61.0	4.8	17	New York	United States	47.7	2.5
8	Dallas/Fort Worth	United States	57.8	1.5	18	Singapore	Singapore	46.5	10.7
9	Frankfurt	Germany	56.4	6.5	19	Guangzhou	China	45.0	9.9
10	Hong Kong	Hong Kong, China	53.3	5.9	20	Shanghai Pudong	China	41.4	2.1

Source: Airports Council International

- The development of air transportation in China is very impressive.
- According to Airports Council International, Beijing Capital ranked as the second busiest airport in the world in 2011 in terms of passenger throughput.
- Airports in Guangzhou and Shanghai Pudong ranked as the 19th and 20th busiest airports in the world in 2011.

Global Ranking (Cont'd)



The top 25 busiest civil airports in the world in terms of freight throughput, 2011

Rank	Airport	Country	Freight throughput (million tonnes)	yoy growth (%)	Rank	Airport	Country	Freight throughput (million tonnes)	yoy growth (%)
1	Hong Kong	Hong Kong, China	3.98	-4.5	13	Los Angeles	United States	1.68	-3.8
2	Memphis	United States	3.92	0.0	14	Beijing Capital	China	1.64	5.7
3	Shanghai Pudong	China	3.09	-4.4	15	Taipei	Taiwan, China	1.63	-7.9
4	Anchorage	United States	2.54	-3.9	16	London Heathrow	United Kingdom	1.57	1.2
5	Incheon	South Korea	2.54	-5.4	17	Amsterdam	The Netherlands	1.55	0.8
6	Paris	France	2.30	-4.1	18	New York	United States	1.35	-0.5
7	Dubai	United Arab Emirates	2.27	0.0	19	Bangkok	Thailand	1.32	0.9
8	Frankfurt	Germany	2.21	-2.6	20	Chicago	United States	1.31	-4.7
9	Louisville	United States	2.19	1.0	21	Guangzhou	China	1.18	3.1
10	Tokyo Narita	Japan	1.95	-10.3	22	Indianapolis	United States	0.97	-4.0
11	Singapore	Singapore	1.90	3.1	23	Tokyo Haneda	Japan	0.87	6.6
12	Miami	United States	1.84	0.3	24	Shenzhen	China	0.83	2.4
					25	Newark	United States	0.81	-5.0

Source: Airports Council International

- As for the top 25 busiest cargo airports in the world in terms of air freight throughput in 2011, airports in Shanghai Pudong, Beijing Capital, Guangzhou and Shenzhen ranked as the 3rd, 14th, 21st and 24th place, respectively.

III. GOVERNMENT POLICIES

The 12th Five-Year Development Plan for Integrated Transportation System

In July 2012, the State Council promulgated *the 12th Five-Year Development Plan for Integrated Transportation System* 《十二五綜合交通運輸體系規劃》*.

Traffic forecast by the end of 12th Five-Year Plan (FYP) period (2015)

Indicators	Unit	2010	2015	Ave. yoy growth (%)
Passenger traffic	Billion person	33	47	7.5
Passenger-km	Billion passenger-km	2,789	3,950	7.2
Freight traffic	Billion tonne	32	46	7.0
Freight tonne-km	Billion tonne-km	14,184	20,100	7.2

Development goals for transport infrastructure in the 12th FYP period (2011 – 2015)

Indicators	Unit	2010	2015
Length of railway in operation	'000 km	91	120
- electrified	%	46	60
Length of highway in operation	'000 km	4,008	4,500
Coastal berths	Unit	1,774	2,214
Number of civil airports	Unit	175	230

*Source: government website http://www.ndrc.gov.cn/zjgx/t20120723_493203.htm

The 12th Five-Year Development Plan for Integrated Transportation System (cont'd)

- Major tasks during the 12th FYP period:
 - Accelerating the development of transport infrastructure and facilities (*See also pages 44 – 46*)
 - Uplifting the technological level in transportation system and equipment
 - Improving transportation service quality, providing a competitive market environment for the development of transportation and logistics services
 - Strengthening traffic safety management
 - Saving resources in the processes of transportation planning, construction, operation and maintenance; promoting environmental protection

Transport infrastructure and facilities development – Setting-up inter-regional transportation networks

Road

- Targeting the completion of construction project of expressway network
- Strengthening national and provincial highway reconstruction

Key Projects

- Reconstruction of 15 congested routes, e.g.:
 - G103 (Beijing-Tanggu)
 - G104 (Beijing-Fuzhou)
 - G105 (Beijing-Zhuhai)
 - G107 (Beijing-Shenzhen)

Rail

- Developing HSR
- Strengthening inter-regional and western region connections
- Establishing sea-rail intermodal transportation system

- Construction of national passenger railways including:
 - Beijing-Shenyang
 - Zhengzhou-Chongqing
 - Shanghai-Nantong
- Construction of dedicated lines for coal:
 - Shanxi-Shandong
 - Shanxi- & Shaanxi-Caofeidian port in Tangshan
- Construction of inter-regional lines

Water

- Optimizing the layout design of ports
- Accelerating the construction of coastal port infrastructure
- Upgrading the facilities of high-class inland waterways along the Yangtze river

- Construction of coastal ports:
 - Coal ports in Jinzhou, Tangshan, Tianjin, etc.
 - Crude oil ports in Dalian, Rizhao, etc.
 - Mineral ports in Tangshan, Qingdao, etc.
 - Container ports in Tianjin, Shanghai, Ningbo-Zhoushan, Guangzhou and Shenzhen, etc.
- Other inland waterways along the Yangtze river

Air

- Optimizing air space system
- Restructuring the air route network
- Accelerating airport development in Beijing, Shanghai and Guangzhou and strengthening the role of international hubs
- Building inland airport hubs in Central and Western China

- New airport in Beijing
- Airport expansion works in Guangzhou, Shanghai/Pudong, Shenzhen, Chongqing, Wuhan, etc.
- New airport study plans for Chengdu, Qingdao, Xiamen, Dalian, etc.
- Set-up airport operation and management centers

Transport infrastructure and facilities development – Developing integrated transportation hubs

Developing 42 integrated transportation hubs



- Optimizing the layout design and functions of rail stations, highway terminals, and airports for handling *passenger traffic* in the integrated transportation hubs
- Optimizing the layout design and functions of rail stations, highway freight terminals, sea and air freight terminals for handling *freight traffic* in the integrated transportation hubs
- Developing the integrated transportation hubs by conducting coordination plans, including urban-rural plan, city design, land-use plan, etc.

Transport infrastructure and facilities development – Others

- Establishing inter-city transportation networks
 - Setting up inter-city networks: railway and expressway will be principal modes for inter-city transportation, supplemented by national and provincial highway and commuting airway connections.
 - In the regions of Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta, expressway will be the principal transportation mode for inter-city traffic.
 - For the intra-city traffic within city clusters, reconstruction/ expansion projects of highway will be accelerated.
- Strengthening public transport network
- Setting up rural transportation facilities
- Accelerating the transportation linkage with Hong Kong and Macau
 - Enhancing Hong Kong's role of international shipping centre
 - Accelerating the construction of Hong Kong-Zhuhai-Macao Bridge
 - Targeting the completion of Guangzhou-Shenzhen-Hong Kong passenger line by 2015
 - Further coordinating the use of air space in Pearl River Delta, Hong Kong and Macao

Other major policies in 2012

Date	Name of Policy	Launched by	Key Highlights
May	Opinions on Encouraging Private Investment in Railways 《關於鼓勵和引導民間資本投資鐵路的實施意見》 ¹	Ministry of Railways	<ul style="list-style-type: none"> - Support private enterprises investing in the construction of railway projects, including dedicated passenger lines, inter-regional lines, dedicated coal lines, rail stations, etc. - Encourage private enterprises providing passenger and freight services - Encourage private enterprises participating in inspection and safety evaluation of rail projects, etc.
July	Opinions on Strengthening Road Transport Safety 《國務院關於加強道路交通安全工作的意見》 ²	The State Council	<ul style="list-style-type: none"> - Strengthen safety management of road transport enterprises via regulating the operation activities and standardizing road safety mechanism of enterprises - Reinforce the safety responsibility of road transport enterprises
July	Opinions on Promoting the Development of Civil Aviation Industry 《國務院關於促進民航業發展的若干意見》 ³	The State Council	<ul style="list-style-type: none"> - Strengthen airport network planning and the connectivity between hub airports and small airports - Accelerate the development of general aviation - Enhance airport competitiveness in the international aviation market - Accelerate the establishment of a modernized air space system
August	Opinions on Improving Management and Accelerating the Healthy Development of the Shipping Sector 《關於完善管理促進國內航運業健康平穩發展的意見》 ⁴	Ministry of Transport	<ul style="list-style-type: none"> - Enhance market surveillance and analysis of the shipping sector - Strengthen resource allocation and vessels' capacity control - Encourage the development of shipping enterprises by promoting merger and acquisition, and organizational restructuring

Sources: Government websites

¹ http://www.china-mor.gov.cn/zwzc/gfwj/201205/t20120518_31830.html

² http://www.gov.cn/zwgk/2012-07/27/content_2193042.htm

³ http://www.gov.cn/zwgk/2012-07/12/content_2181497.htm

⁴ http://www.moc.gov.cn/zhuzhan/zhengwugonggao/jiaotongbu/shuiluyunshu/201208/t20120823_1289995.html

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