

## The Status and Development Trend of Tire Industry in China

Zhaojun Wang<sup>a</sup>, Shuai Liu<sup>b</sup>

Qingdao University of Science & Technology, Shandong 266061, China

<sup>a</sup>wzjun599@sina.com, <sup>b</sup>lesley4361@163.com

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**Abstract.** China is a large tire country. In this paper, analyzed the current situation of China's tire industry, and predicted the development trend. Drew the conclusion that tire industry in China will show a steel supply and demand in future, and the growth of tire demand will exceed the supply.

### Introduction

In recent years, the national economy in China has developed rapidly, so as the automobile industry, which stimulated the development of tire industry, the scale and strength has been promoted greatly. At present, the tire production, exports and the number of enterprises of China's tire industry is the top 1 in the world, China has been the large tire country. As the growth demand of automobiles around the world and the rapidly development of economy in China, the tire industry will keep growing in the future.

### The Status of Tire Industry in China

China's economy has got the remarkable achievement after the reform and opening up, the manufacturing industry has developed rapidly, and so did the tire industry. At present, the scale of China's tire industry is the top 1 in the world, the degree of industrial concentration is rising, the industrial strength is upgrading in the global tire market. The analysis is as follows:

**The Scale of Tire Industry Increasing.** After the founding of New China, the tire industry was so weak that the tire production was only 23000.30 years later, in 1978, the annual output of tire has reached 9.36 million. After the reform and opening up, tire industry has been developed rapidly. In 2000, there were more than 360 enterprises, the products included truck tires, light truck tires, car tires, construction machinery tires, industrial vehicle tires, agricultural tires, and other special tires, the annual output of tire amounted to 101 million, which was the top 3 of the world, and the annual output of radial tire reached 36.09 million, accounted for more than 1/3 of the total tires. In the 21<sup>st</sup> century, the national economy developed rapidly in domestic, which promoted the development of the tire industry [1]. From 2005 to 2012, the number of enterprises increased from 406 to 537, the employees increased from 222 thousand to 341.4 thousand, sales value of industrial products increased from 106.3 billion Yuan to 462.586 billion Yuan, the exports value increased from 27.56 billion Yuan to 101.661 billion Yuan. For the tire and radial tire production, the tire industry has shown signs of growth. In 2006, the number amounted to 280 million, and for the first time larger than America and became the world's largest tire producer. In 2013, China's tire annual output up to 52.9 million, the average annual growth rate was 24.67%, the radial tire output increased from 4.254 million to 47.6 million, with the average annual growth rate was 84.91%, and the proportion of radial tire production increased from 31.85% to almost 90% (Fig.1).

**The Degree of Industrial Concentration of Tire Industry Rising.** In recent years, the strength of tire industry has been greatly enhanced, the degree of industrial concentration is rising. These years, the proportion of China's enterprises in the global top 75 tire enterprises list is between 20% to 40%, which is growing, to 2013, the number of China's enterprises in the list has been amounted to 34, which accounted for about 45.33%. At the same time, the sales revenue of the tire enterprises climbed steadily, from less than \$8 billion in 2005 to nearly \$35 billion in 2013, with the average

annual growth rate of 22.16%, and the sale revenue share of world tire market increased from 7.24% to 18.64%(Table1), which reflects the degree of industrial concentration of tire is rising in China.

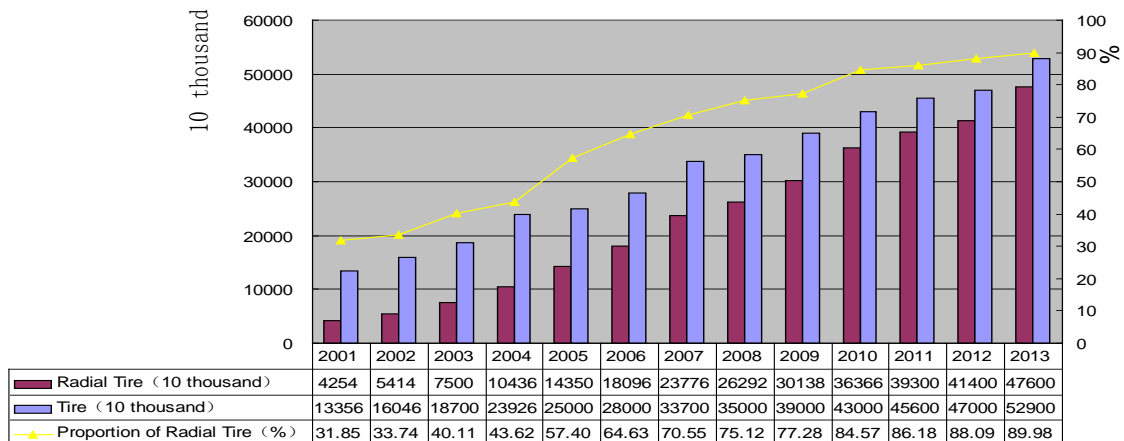


Fig. 1 Production of tire and radial tire from 2001 to 2013

Table 1 China's tire enterprises on the global top 75 list from 2005 to 2013

Year	Number	Sales Revenue/billion dollar	Growth Rate of Revenue / %	Share of market / %
2005	21	7.418	--	7.24
2006	16	8.215	10.74	7.30
2007	17	10.577	28.75	8.33
2008	24	16.697	57.86	11.93
2009	27	20.081	20.27	15.75
2010	28	23.237	15.72	15.09
2011	31	28.734	23.66	15.33
2012	31	31.974	11.27	17.07
2013	34	34.854	9.01	18.64

### Forecast of the Development Trend of Tire Industry in China

In recent years, in light of the economic crisis and the implement of tire tag system in the developed countries, which has added the obstacles for China's tire industry. Therefore, to forecast the development trend is conducive to tire industry for taking measures, so as to respond to the changing situation both at home and abroad. This section forecast the production and demand of tire from 2014 to 2021, to conclude the development trend of China's tire industry.

**Forecast of the Tire Production.** From 2007 to 2013, the tire production has been increased from 337 million to 529 million, with the average annual production of 423.14 million, and the growth rate was about 7.87%.The paper predict the tire production in China in 2014-2021, based on the annual growth rate (Table2). According to forecast data, in 2015, the tire production will be more than 600 million, in 2019, it will be more than 800 million, and in 2021, it will be close to 1 billion.

Table 2 China's tire production from 2007 to 2021

Year	Production/million	Growth rate /%	Year	Production Forecast /million
2007	337	—	2014	570.63
2008	350	3.86	2015	615.54
2009	390	11.43	2016	663.98
2010	430	10.26	2017	716.24
2011	456	6.05	2018	772.61
2012	470	3.07	2019	833.41
2013	529	12.55	2020	899.00
Average	423.14	7.87	2021	969.75

**Forecast of the Tire Demand.** Demand in tire market can be divided into 3 parts: complementary tire market, service market and international market. There are many different sorts of tires, such as automobile tires, construction machinery tires, agricultural tires, industrial vehicle tires, military tires and aircraft tires, and so on. In which the automobile tires has the biggest share of the market demand, while the others demand accounted for only a few. Therefore, the paper take the automobile tires as the research object and to forecast the tire demand in China in 2013-2021.

Table 3 Production and ownership of automobiles in China from 2007 to 2012

Year		2007	2008	2009	2010	2011	2012	Average
passenger cars	Production/million	6.38	6.74	10.39	13.90	14.49	16.51	11.40
	Growth rate/ %	—	5.59	54.12	33.83	4.23	14.00	22.35
	Ownership/million	29.62	35.95	45.91	58.61	72.04	86.83	54.83
	Growth rate/%	—	21.40	27.70	27.67	22.91	20.52	24.04
Light commercial vehicle	Production/million	1.43	1.22	1.57	1.95	1.85	1.88	1.65
	Growth rate/ %	—	-14.99	29.32	23.72	-5.21	1.59	6.89
	Ownership/million	6.24	6.76	7.91	9.33	10.60	11.93	8.79
	Growth rate/%	—	8.28	17.14	17.91	13.57	12.59	13.90
heavy commercial vehicle	Production/million	0.88	1.22	1.70	2.26	1.92	1.70	1.62
	Growth rate/ %	—	39.40	39.16	32.55	-14.84	-11.41	16.97
	Ownership/million	6.65	6.94	8.31	9.27	10.02	9.62	8.47
	Growth rate/%	—	4.46	19.72	11.55	8.12	-4.06	7.96

Table 4 Production and ownership of automobiles in China from 2013 to 2021

Year	Passenger cars/million		Light commercial vehicle/million		Heavy commercial vehicle/million	
	Production	Ownership	Production	Ownership	Production	Ownership
2013	20.2041	107.7052	2.0039	13.5888	1.9935	10.3816
2014	24.7198	133.5975	2.1420	15.4777	2.3318	11.2080
2015	30.2446	165.7143	2.2896	17.6291	2.7276	12.1002
2016	37.0043	205.5521	2.4473	20.0795	3.1904	13.0634
2017	45.2748	254.9668	2.6159	22.8706	3.7318	14.1032
2018	55.3937	316.2608	2.7962	26.0496	4.3651	15.2258
2019	67.7742	392.2899	2.9888	29.6705	5.1059	16.4378
2020	82.9217	486.5964	3.1948	33.7947	5.9724	17.7462
2021	101.4547	603.5741	3.4149	38.4921	6.9859	19.1588

In recent years, the production and ownership of automobiles increases rapidly. In 2007-2012, the average annual growth rate of production and ownership for passenger cars has been more than 20%, which was 22.35% and 24.04%. And for light commercial vehicle was 6.89% and 13.9%, for heavy commercial vehicle was 16.97% and 7.96% (Table 3). The paper take the data of 2012 to predict the production and ownership of automobiles in China from 2013 to 2021 (Table 4).

Generally, the different automobile tires coefficient for supporting and maintenance is different, for the passenger cars the coefficient it's 5/car and 1.2/car/year, for the light commercial vehicle its

5/car and 1/car/year, for the heavy commercial vehicle it's 12/car and 12/car/year. According to the forecast of production and ownership of automobiles of 2013-2021, and the coefficient of different tires for supporting and maintenance, to calculate and forecast the tire demand in China from 2013 to 2021(Table5).

Table 5 Forecast of China's Tire Demand from 2013 to 2021

Year	Passenger cars tires/million	Light commercial vehicle tires/million	Heavy commercial vehicle tires/million	Tires/million
2013	230.27	23.61	148.50	402.38
2014	283.92	26.19	162.48	472.58
2015	350.08	29.08	177.93	557.09
2016	431.68	32.32	195.05	659.05
2017	532.33	35.95	214.02	782.30
2018	656.48	40.03	235.09	931.60
2019	809.62	44.61	258.52	1112.76
2020	998.52	49.77	284.62	1332.92
2021	1231.56	55.57	313.74	1600.87

## Conclusion

According to the forecast, China's tire production will maintain stable growth trend in the few years, the demand for tires will be growth significantly, and the tires produced in domestic are unable to meet the strong market demand. Firstly, for the tire production, with the growth rate of 7.87%, will be amounted to 571-970 million. Secondly, for the tire demand, regardless of the tire exports has been the top 1 for many years, only the automobile tire demand in domestic will be as high as 473-1601 million, that will greatly exceeded domestic production (Fig.2).In 2021, the gap between tire production and demand will be close to 700 million, accounting for 40% of the tire demand, which will increase the degree of dependence on tire imports, and be unfavorable to China's economy.

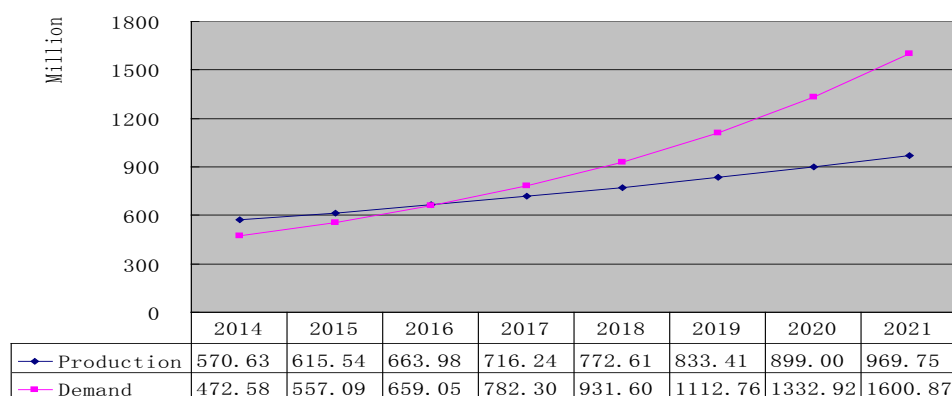


Fig. 2 Tire production and demand in China from 2014 to 2021

## Reference

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