



The Development of Forest Product Industry in China and Its Contribution to the World

Senlin Zhang

President of China National Forest Products Industry Association

Abstract

- ❖ China's forest product industry has become world manufacturing center. (Total product, value, net export, globalization, equipment modernization, large-scale tendency)
- ❖ Continuous strong demand indicates a bright prospect of development (Coming ten years' living standard, population net growth, the level of urbanization, house building, furniture center)
- ❖ China to be the World Manufacturing Center (Provide employment, forestation growth, promote new countryside construction, development engine of global forest product Comprehensive utilization level)
- ❖ The development prospect of China's forest product industry (Golden developing period in the following twenty years, upgrading & transfer)

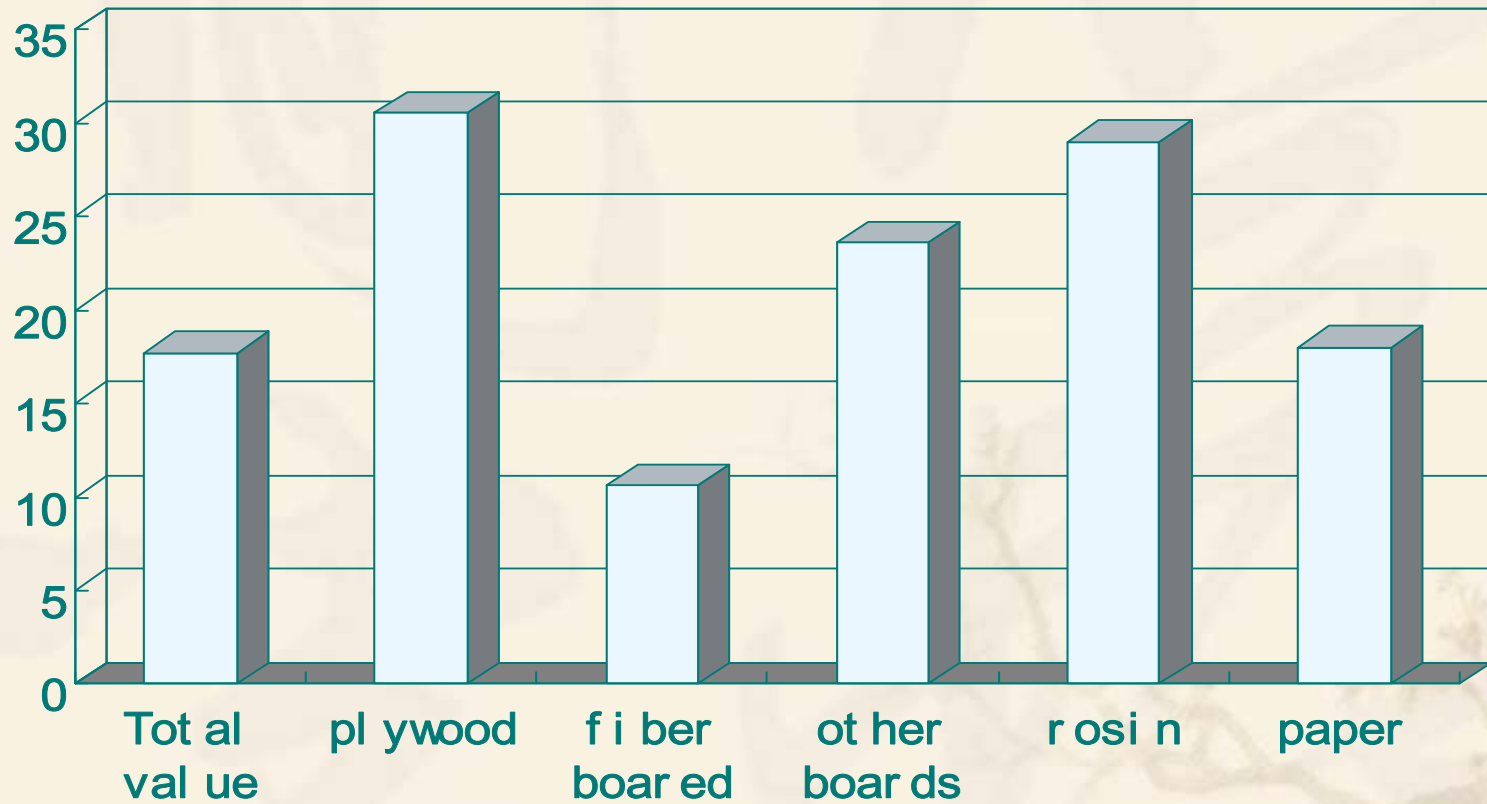
1. China's Forest Product Industry Has Become World Manufacturing Center

- ❖ **Total forest production become the world biggest.**
- ❖ Total product value of forest product in 2007 is RMB 1250 billion yuan, 603.4 billion Yuan for forest product manufacturing industry [1], in which 299.1 billion yuan goes to timber processing.
- ❖ **Timber output 69.77million m³**
- ❖ **Bamboo output 1.398 billion units**
- ❖ **Sawn timber 28.29 million m³**

Production of forest products

- ❖ **Total output of wood-based panel is 88.39 million m³**, including the output of plywood by 35.62 million m³, which is 30.5% more than last year and accounts for 40.3% of the total output of wood-based panel. The output of fiber board is 27.3 million m³. The output of particle board is 8.29 million m³;
- ❖ **Wooden floor is 361million m² ;**
- ❖ Gum rosin is 1.06 million ton, turpentine 108,000 ton;
- ❖ Camphor 14,000 ton, extract is 13,000 ton, and shellac3,430 ton;
- ❖ The output of paper and paper board is 77.87 million ton.

Increasing rate of the year for 2007 from 2006



Changed from net importer to net exporter

- ❖ For example, plywood (table 2), solid wood floor and laminated flooring exported over 20 million m² respectively. The export of our wooden furniture has been the top of the list in the world. The export of veneer, block board, wooden door, wooden molding, bamboo and rattan products and forest products is also increasing. The export of Chinese gum rosin accounts for 60% of the world total value. The export of paper and paper products is 4.329 million ton.

Globalization and ownership structure

- ❖ Foreign capital and non-governmental capital becomes the main investment team in forest product industry, such as Wall Street investment banks including **Morgan Stanley, Goldman Sachs Group and IFC etc.** Foreign capital invested in various product manufacturing fields, equipment manufacturing and material forest base plantation industry, for instance, **Kronospan Group** invested not only in MDF and solid wooden floor production line, but also held stocks of Shanghai Wood-based Panel Machinery Manufacturing Company.
- ❖ Big Paper making factories of the world have been all in China and they started from forest plantation like **UPM, STORAENSO, APP, Oji Paper and Raja Garuda Mas.** Also, companies from Holland, Japan, Korea and Spain invested in Chinese gum rosin industry.

Companies in stock market

- ❖ There are more than 10 companies that have come into the sector. Some of them take it as their main product. Forest product industry companies have financed through the stock market. And the Stock Capitals are raising the professional quality of the trade. It is not only a capital raising resource, but it also shifts the companies to a new level in many parts including corporate legal person managerial structures, transparency of information disclosure and the business performance when facing strict management of capital market and the supervision of stock holders, and They are leading representatives of the advanced manufacturer of forest product industry.

Equipment modernization

- ❖ **Most of the imported production lines are 21st century advanced like MDF and laminated floor. There are now 640 production lines of MDF with total productivity of 28,476,000 m³. Among them 44 production lines of 4,770,000 m³ are newly constructed in 2008, and 61 are imported consisting of multi-opening, continuous single opening and continuous roller pressing. The productivity accounts for 20% of the total.**

Large-scale raises key enterprises' level

- ❖ There are more than 180 plywood enterprises with productivity over 20,000 m³ in China.
- ❖ MDF and HDF board enterprises increased single-line production capacity sharply by introducing large-scaled continuous flat pressing production line. And the annual output of the largest enterprise is 1.5 million m³.
- ❖ There are three production lines with single output over 200,000 m³, and the largest one is over 500,000 m³.

Modernization



Average Scale of newly-built MDF board production line

year	production line	Total productivity (per year) (10,000m ³)	Average Single Productivity (Per year) (10,000m ³)
Before 2001	287	817	Less than 3
2002	40	181	About 4.5
2003	52	284	About 5.5
2008	44	477	About 10.8

2. Continuous Strong Demand Indicates a Bright Prospect of Development

- ❖ GDP has been increasing 9.7% yearly for thirty years. Our next ten years average GDP will still be in accordance with an average of 8% growth rate;
- ❖ Mostly be driven by domestic investment and consumption. Market demand, which is encouraged by steady rise of people's living standards, is increasing greatly;
- ❖ Net population increase leads to a rise in demands. The newly increased purchasing power is 63-65 billion RMB.

**Table 3 Annual payable income rate of
China urban areas (RMB)**

Year/ Region/Income	East	Middle	West
1978	372	337	341
2004	11523	7829	8001

The rapid growth of urbanization

- ❖ By the end of 2007, the population in urban areas and towns is 594 million and the level of urbanization is 44.9%;
- ❖ It increased 0.95 annually during 25 years. It is indicated that the average increasing rate is 0.81-1 percent in the coming 10 to 15 years;
- ❖ There are now 655 cities and 20,000 towns building now in China [4].

House building becomes one of pillar industry of national economy

- ❖ The annual growth rate for investment and building is between 20%-30% in recent years;
- ❖ In 1978 construction industry accounted for 3.8% of GDP. In 1991, 4.7%, and 6.7% in 2003;
- ❖ Take an example of city dweller, the population is 190 million, per capita housing area is less than 5m² . In 2005, the population is 540 million, per capita housing area is more than 26 m² ;
- ❖ Investment in real estate industry is 2854.3 billion, increased 32.2%;
- ❖ Commercial house investment 1801 billion, increased 32.1%;
- ❖ Commercial house sale is 761.93 million m² , increased 23.2%, among them commercial house residential is 691.04 million m² , increased 24.7%. Commercial house area completed 582.36 million m², increased 4.3%.

World furniture Center is moving to China

- ❖ The total product value of China's furniture in 2007 is 430 billion Yuan. The predicted total product value in 2008 is 500 billion Yuan and export will be 20 billion dollars (expected in 2007).**

3. The Significant of China's being World Manufacturing Center

1) Provide jobs

- ❖ Forest product industry is basically a labor intensive industry, especially when industry chain moves upwards into the industry of plantation forest and material harvesting, transportation, and take the labor intensive as the key links; plantation in the hills, digging, planting, fertilizing within the first three years, harvesting, plywood: peeling, nature drying, veneer handling, scarfing etc.; Block board, wooden doors, wooden Windows, wood molding, bamboo crafts;
- ❖ Wooden flooring: solid wood manual quality control, hand planer, solid wood compound base material, etc.

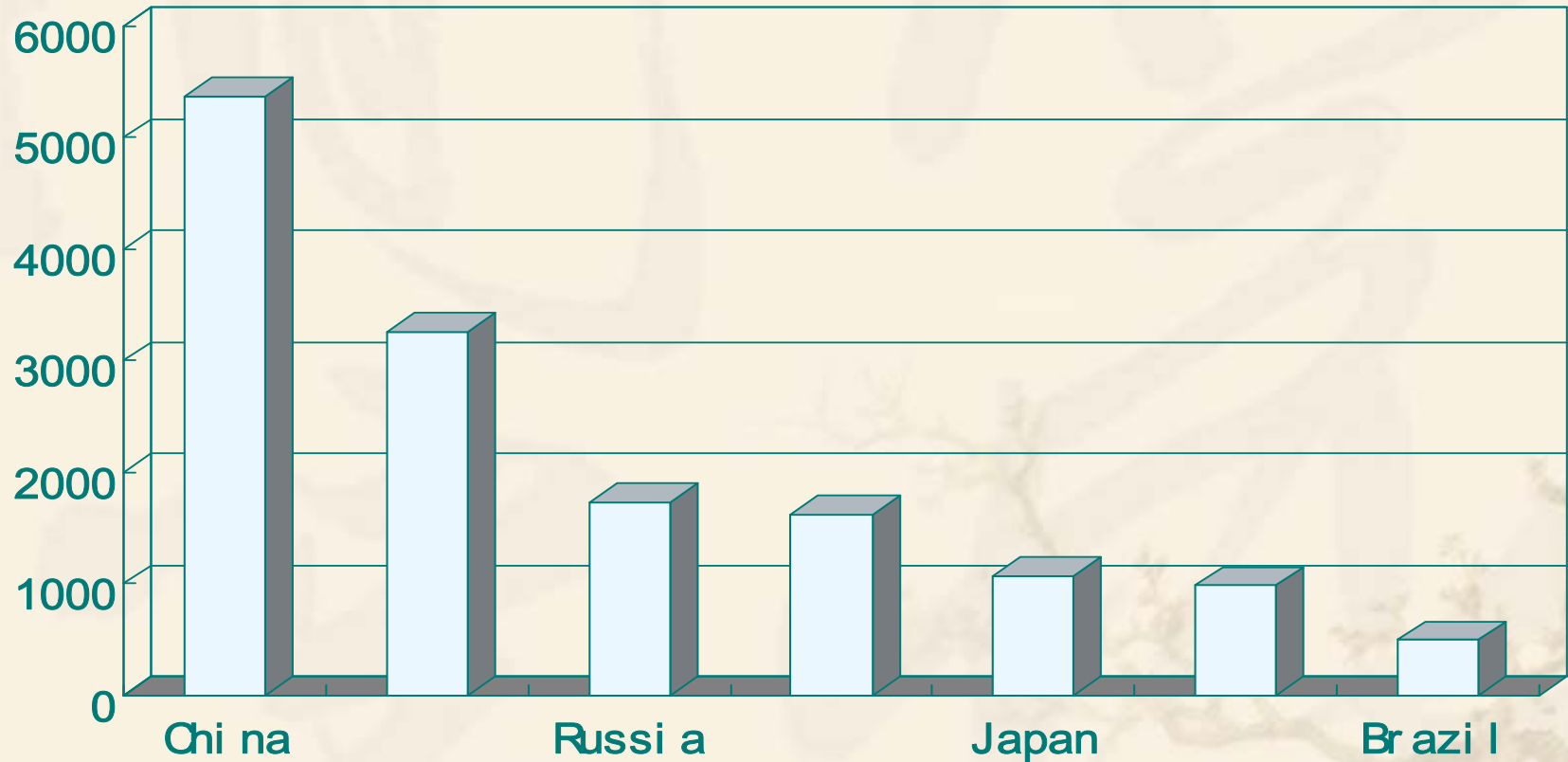
Employment

- ❖ If we divide the total product value of forest product by overall labor productivity 42,633 RMB per person per year of forest enterprises, we can get that the job availability is 29.32 million (more in reality). Among them, 14.15 million jobs are needed for forest manufacturing industry. Especially it is quite helpful to the poor people living in the mountain area (56% of the total population), ethnic minority area and other remote areas.
- ❖ Japanese Nomura Research Institute Ltd. executive director said: there are 490 million working-age populations in rural areas in China. 180 million go to find work in township and village enterprises, and the rest 310 million stay in the rural areas. However, only 170 million is needed from the arable land point, therefore there are 140 million surplus labor forces. So it is quite important to provide job opportunities for the countryside population. Most of the forest industry in China located in mountain area, forest industry job opportunities help releasing the huge pressure of unemployment, contribute to the peace and harmony of the rural areas and relieve some poverty of the countryside in China. It is also meaningful to the world.

Driving forestation (plantation) growth

- ❖ **Forestation in Waste Hills and lands has been accomplished 3,907,7 00 hectares in 2007, more than 6,000,000 hectares in some years. Rapid development of the forest product industry demands large number of wood, which drove the plantation forest. This is the reason why plantation forest area in China is the largest in the world.**

**Table 4 World maintain plantation area
(10,000 hectares)**



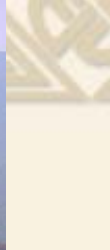
Agriculture - Forest





Typical Plantation in China





Eucalyptus



2002 4 15



❖ not only the wood plantation but also the bamboo resources has manufactured into different products in the world market



New countryside (town)

- ❖ People employed in **State forest industry** are 1,396,100 which consist mostly farmers.
- ❖ In recent years, various seedling bases, product manufacturing, auxiliary industry and distributing centers spread all over China and formed hundreds of concentrated City-and-Town Areas that have strong radiant and driving ability. The annual output value in some areas is several billion, which greatly promotes new countryside construction.

Leading the global wooden product development

- ❖ **Every year we import 37 million m³ of log, 6million m³ of sawn timber, high-grade panels, furniture, and other related materials like decorative paper, wear-resistant paper, chemical raw materials and adhesives, lacquer and metal connecting fittings. What's more, we are the largest importer of equipment for furniture and panel processing in the past ten years, which not only provide a huge new market for global manufacturers but also offer the most at the best price in the world. One third of our forest products exports to the world.**

Table 5 China pulp import & export

Year	Import (10,000t)	Import ratio(%)	Export (10,000t)	Export ratio(%)
2003	603.4	14.6	2.5	30.3
2004	731.9	21.3	1.8	-30.2
2005	759.2	3.7	4.7	168.1
2006	795.8	4.8	7.5	58.9

Table 6 China paper & paper board import & export

Year	Import (10,000t)	Import Ratio(%)	Export (10,000t)	Export Ratio(%)
2003	635.8	0.4	114.4	54.8
2004	610.6	-4.0	101.3	-11.5
2005	521.0	-14.7	166.9	64.8
2006	436.1	-16.3	304.5	82.5
2007	397.8	-8.8	421.7	38.5

Table 7 Plywood import & export (10000m³)

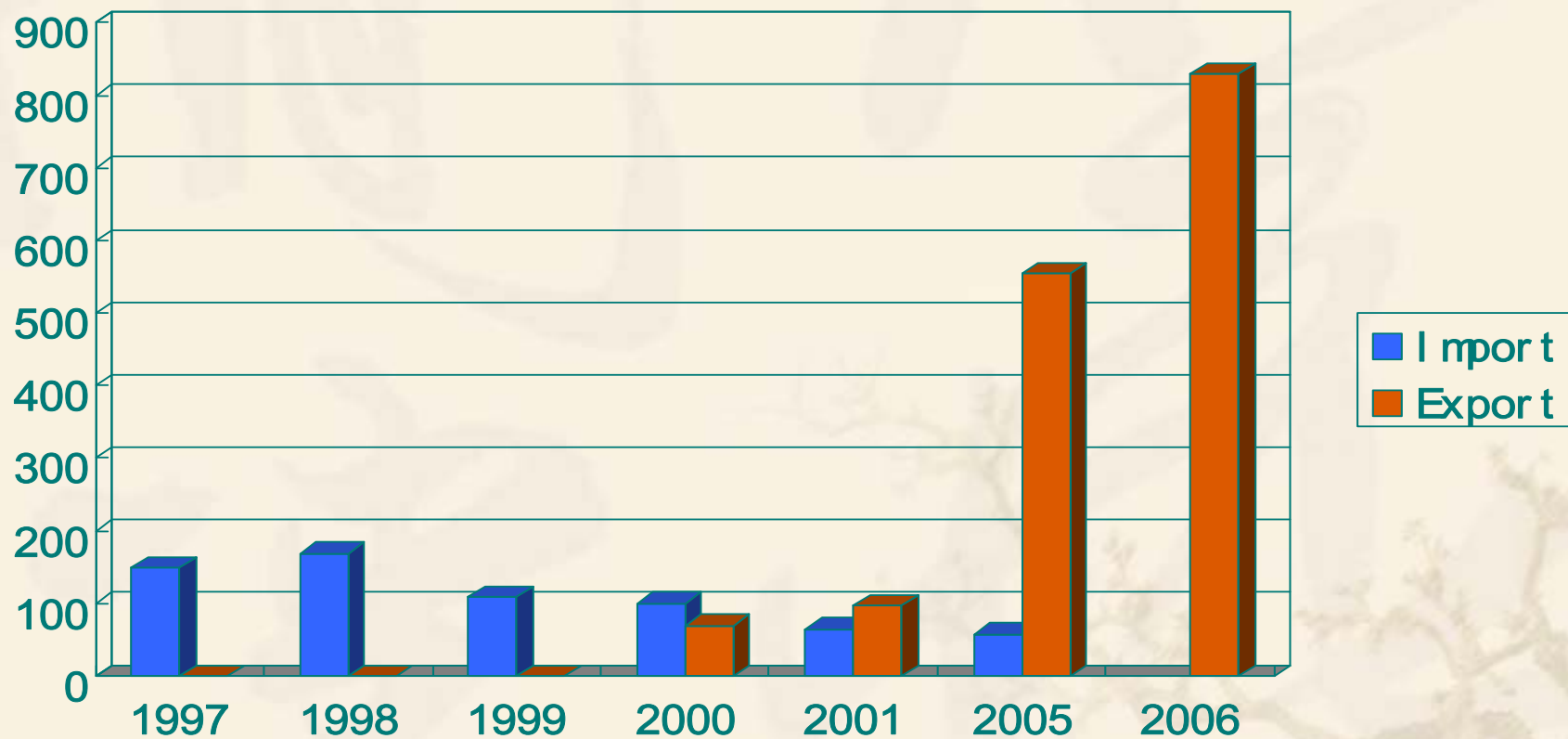


Table 8 Main countries exported of plywood in 2006

Countries/ Regions	US	Japan	UK	Korea	China Hong Kong	Other 160 countries
Quantity (10000m ³)	218	63	54	52.5	24.7	418
Ratio (%)	26	7.6	6.5	6.3	3	50

Table 9 Quantity of imported veneer, value & unit price

Year	1998	2002	2003	2004
Total Imports(10000m ³)	53.87	28.67	22.34	15.41
Total Imports(100million USD)	1,53	0.89	0.96	1.10
Average price USD/m ³	283.4	310.4	427.4	713.1

Comprehensive Utilization Increases

- ❖ 1) Recycle paper waste
- ❖ Guardian.co.uk 2008 8 19. Sending old newspapers and plastic bottles for recycling in China produces more carbon savings by John Vidal
- ❖ A UK government body who is in charge of reducing waste reveals a study: sending old newspapers and plastic bottles for recycling from Britain to China will produce more carbon savings than placing them in landfills in Britain and make new goods.
- ❖ U.K. Annual exports of paper waste for the last 10 years, mainly to India, China and Indonesia, have risen from 470,000 ton to 4.7m ton, while exports of old plastic bottles have gone from under 40,000 ton to half a million ton. Researchers found out that each ton of the waste reduces carbon dioxide emission 1300 kg to 1600 kg.

Table 11 Waste paper imported by China

Year	Import (10,000t)	Import Ratio(%)	Average price (\$/ton)	Import price Ratio(%)
2003	938.2	36.5	131.2	23.2
2004	1230.1	31.1	140.3	6.9
2005	1703.6	38.5	144.2	2.8
2006	1962.3	15.2	140.0	-2.9
2007	2256.2	15.0	79.2	27.9

Table 12 Place imported waste paper in 2007

Place of import	Import (10,000t)	Increase Ratio (%)
US	932.5	9
UK	272.3	28.8
Holland	156.7	21.7
Japan	316.7	-2.3
HongKong	107.3	9.4

High comprehensive utilization level of wood-based panel

- ❖ The development of fiber board and particle board utilizes which is once considered waste materials such as sub-quality & small fuel wood, even tree roots.
- ❖ Plywood board and floor board can promote the extensive use of tree species, increase the value of the former useless material and encourage plantation.
- ❖ For example, the material used thirty years ago for plywood board in China is *alniphyllum fortunei*, changed to *choerospondias axillaries*, *schima superba*, masson pine, poplar tree, larch, eucalyptus. And the material for floor board was Chinese oak and teak 30 years ago, but now it is extended to Chinese locust, elm and eucalyptus. The starting diameter of timber is reduced from 26 cm to 8cm.

4. The development prospect of China's forest product industry

- ❖ Golden developing period in the following **twenty years**.
- ❖ China is rich in human resources. There is comparative advantage in **labor price**. Since the development of human resources after the reform and opening policy, our country has become the largest one in human capital storage in the world. The total labor resources of China shared world total increased from 7.6% in 1980 to 24.04% in 2003. It is 1.85 times of that in India, 2.76 times of that in US, 6.39 times of that in Russia and 7.91 times of that in Japan.

The local development

- ❖ The water and thermal elements of Chinese hills are suitable for **fast-growing and high-yielding forest**. China's productivity development level can be divided into **east, middle and west region**. China's forest product industry characterized by labor intensive products should have another ten or twenty years of development space.

Forest industry will take another twenty years to grow and become strong

- ❖ China's economic capacity from GDP\$2,400 per person to over GDP\$10,000 (annual average salary is 13,373 RMB for forest industry workers in 2007);
- ❖ A historical developing period at which **labor intensive** industry shall be transitioned to **capital intensive and technological intensive**;
- ❖ From external-oriented to internal demand-pull;
- ❖ From learning and introducing technology to self-research and development with intellectual property rights for key technologies;
- ❖ From small firm to a modernized multinational forestry-industry-commerce integrated corporation with independent intellectual property rights;
- ❖ China's forest product industry can then contribute much further to the global forest industry.

Thank you-Gracias

- ❖ Tel: 008610-84238952
- ❖ Fax: 008610-84239171
- ❖ Email: zsl306@vip.sina.com
- ❖ Shengfu**w**@163.com