

Chinese Wood-based Panel Industry — How to cope with the development in furniture industry

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China National Forest Product
Industry Association



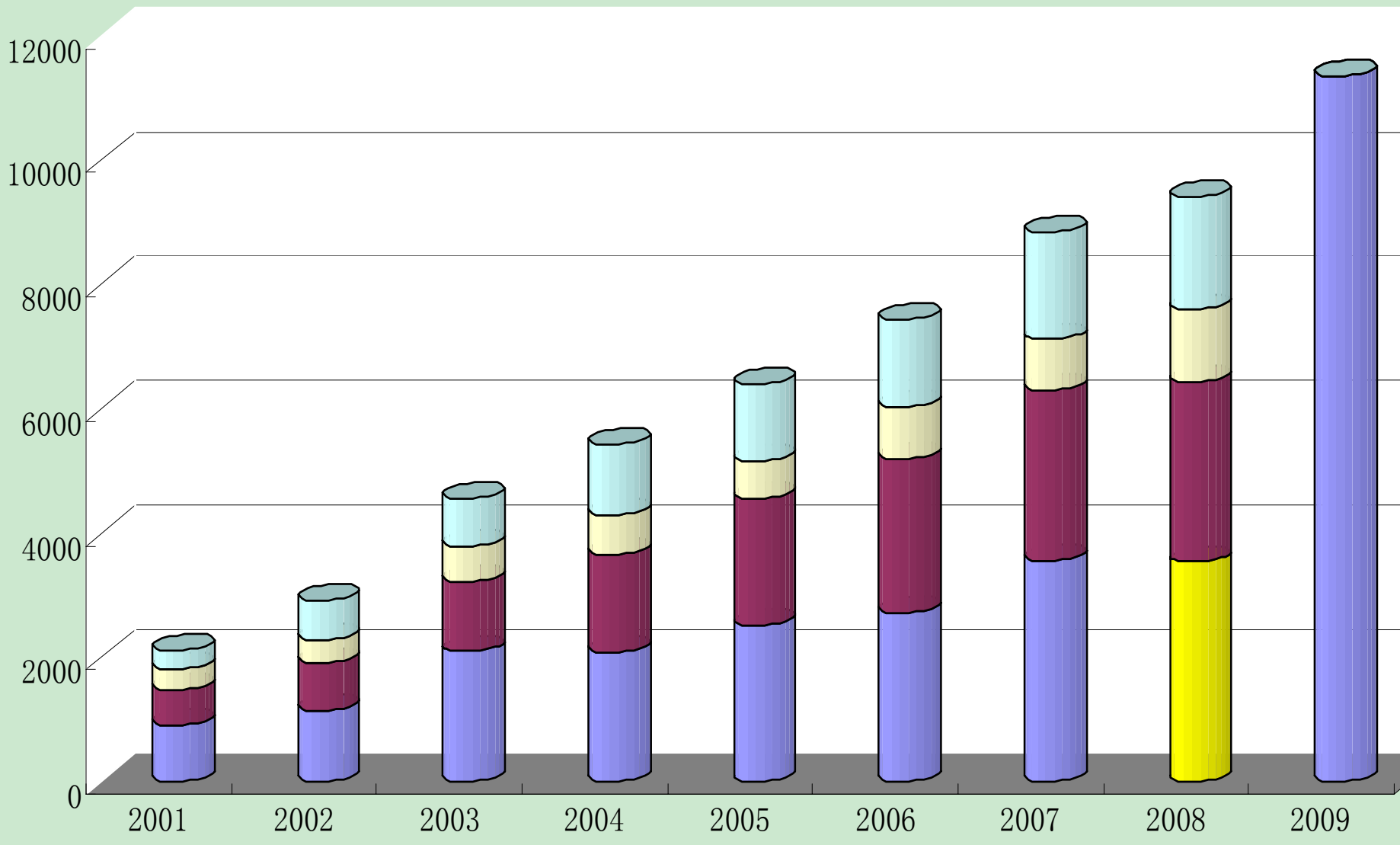
- ✦ Industry status
- ✦ Application analysis
- ✦ Market demand
- ✦ Develop trends





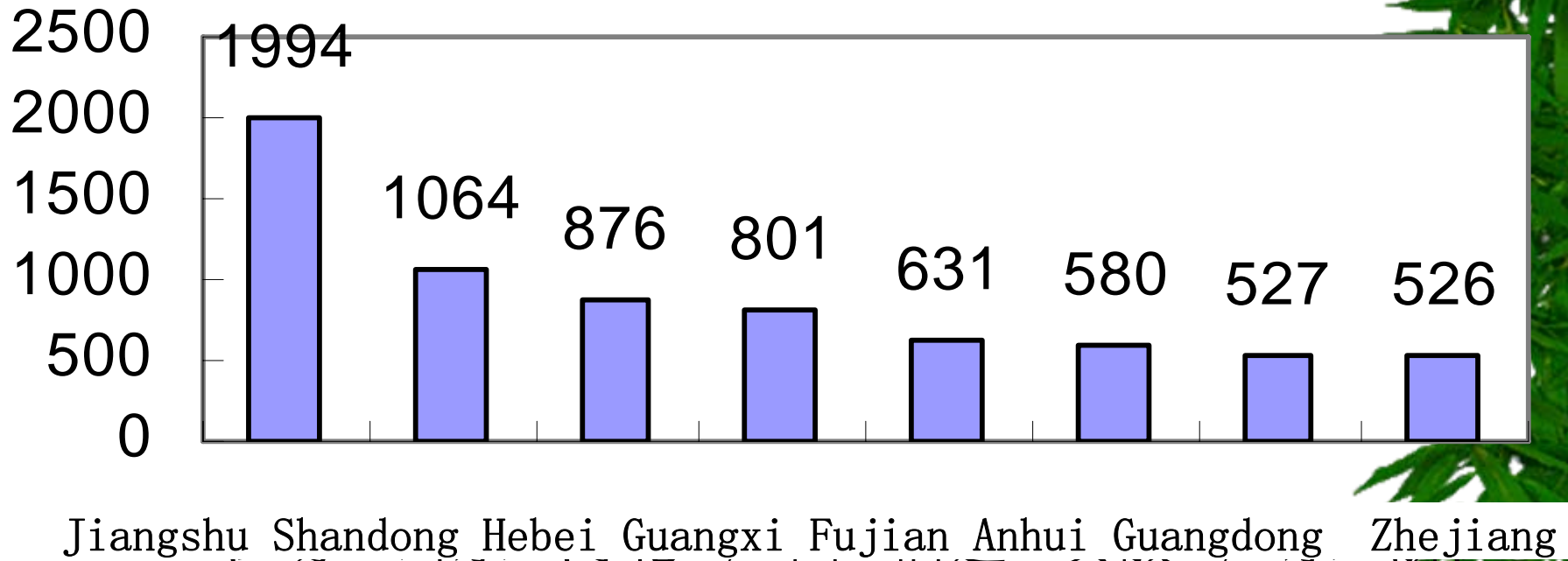
There are about 6000 wood-based panel enterprises in China with the total yield over 100 million m³. China occupies No.1 in world wood-based panel production, consumption and import & export trading

万立方米



■ 胶合板 ■ 纤维板 ■ 刨花板 ■ 其他人造板

The top 8 provinces in wood-based panel production in 2008 (> 5 million m³)



Geographical distribution of wood-based panel enterprises

Product	The number of enterprises	Production scale	Located provinces
Plywood	5000	35 million m3	Jiangsu, Shandong, Hebei
Particleboard	500	10 million m3	Fujian, Guangdong, Jinlin
Fiberboard	600	35 million m3	More than 20 provinces

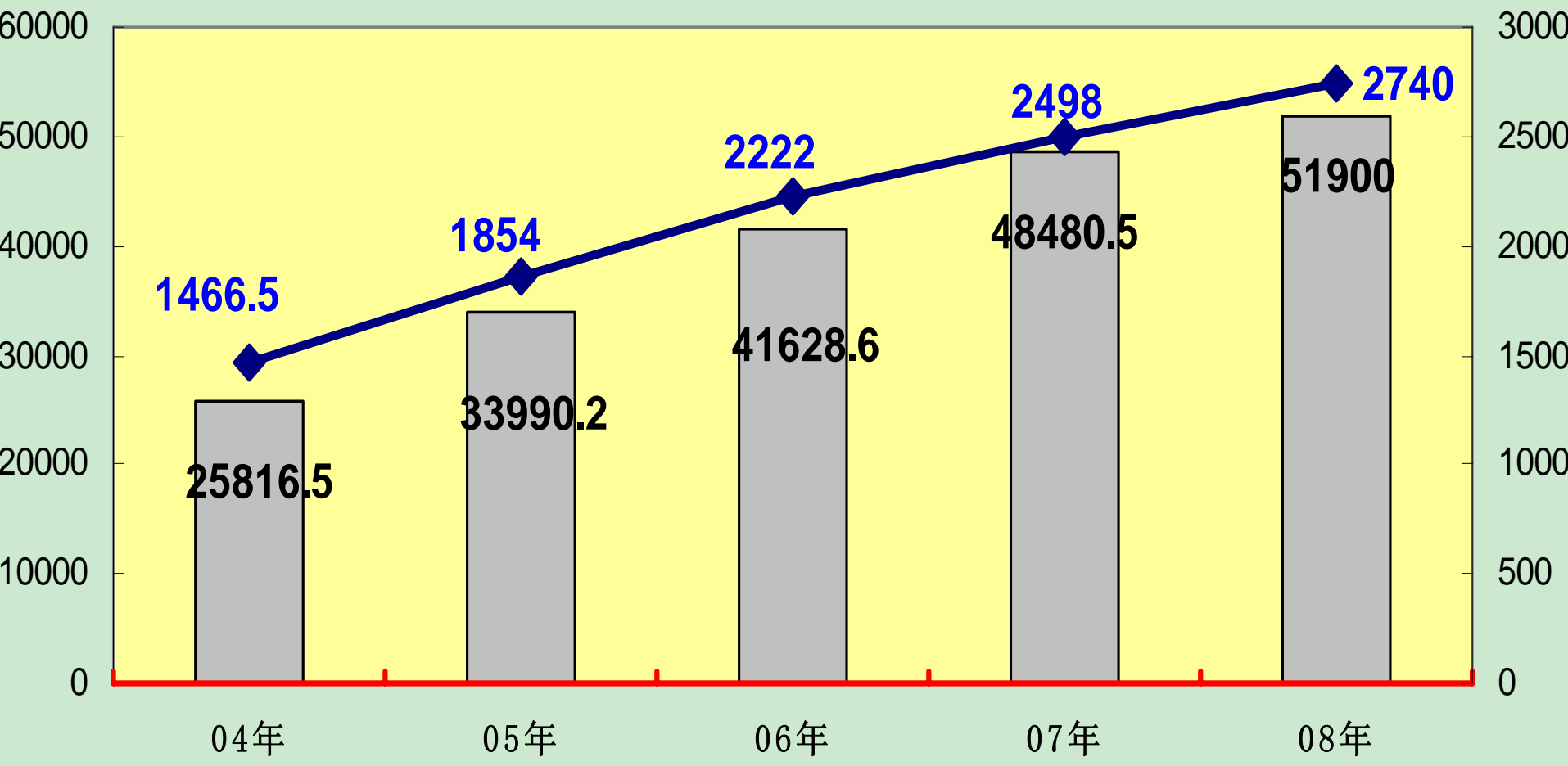
The number of production licenses assigned in wood-based panel and flooring enterprises

Ply wood	Blockboard	Fiber board	Particle board	Melamine faced board	Veneer faced board	Solid Wood flooring	Laminated flooring	Engineered flooring
1570	1400	470	360	350	340	700	800	400

Total: 5479 enterprises (6540 products)

Furniture production is the main engine of MDF development

Furniture Furniture & medium density fiber board (10000 piece\m3)

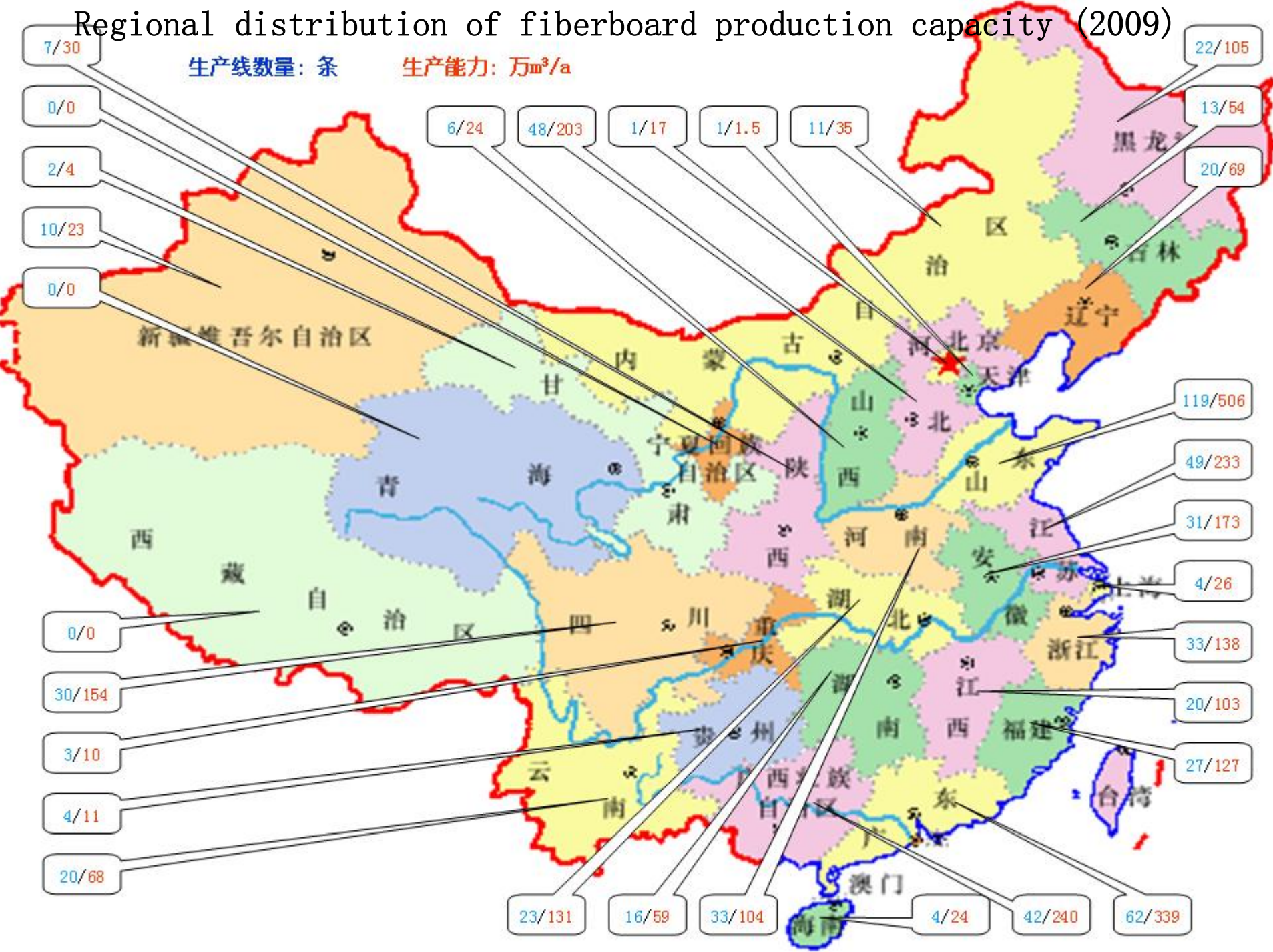


Legend: Furniture (grey bar), medium density fiber board (blue line with diamond)

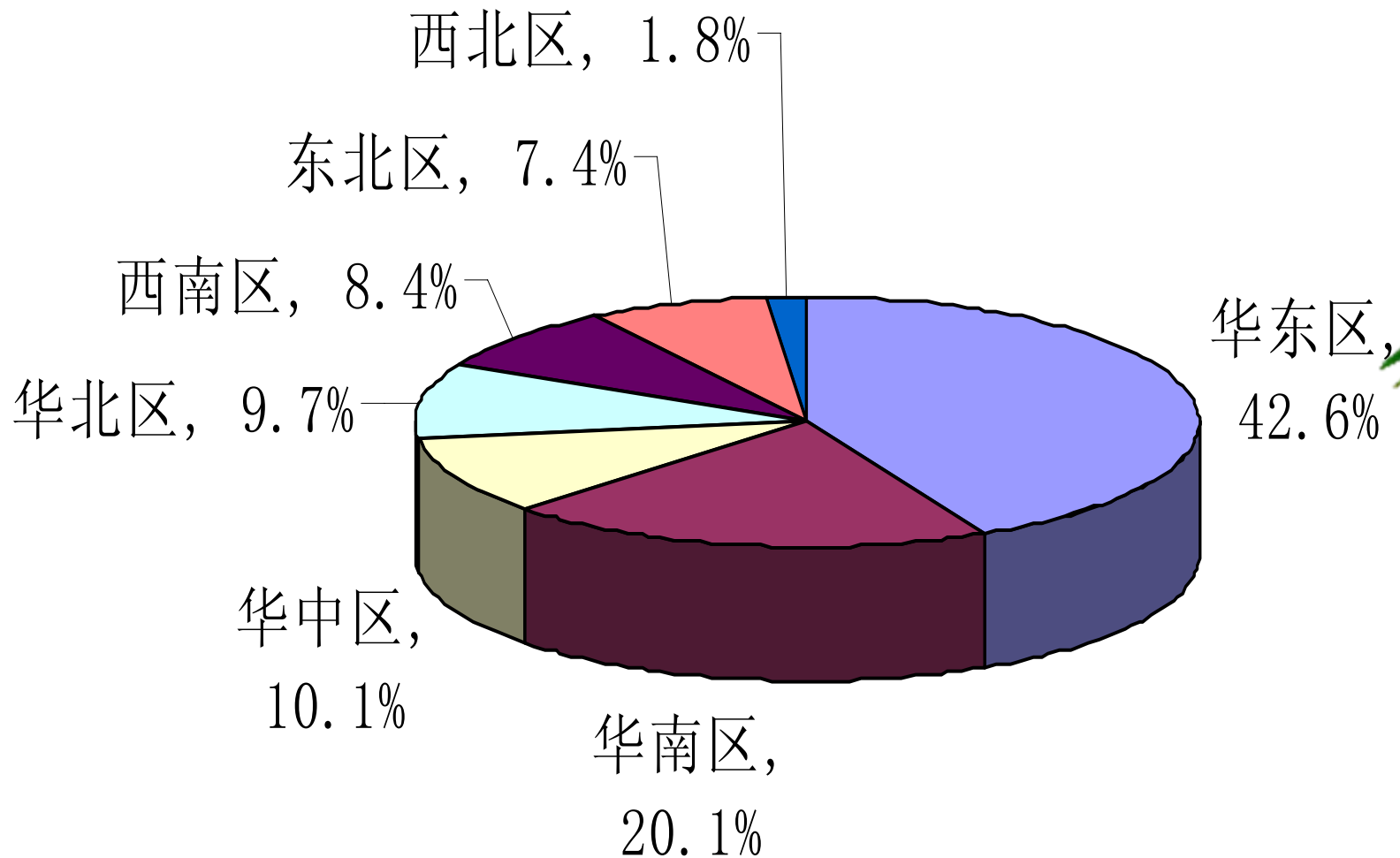
Regional distribution of fiberboard production capacity (2009)

生产线数量: 条

生产能力: 万m³/a

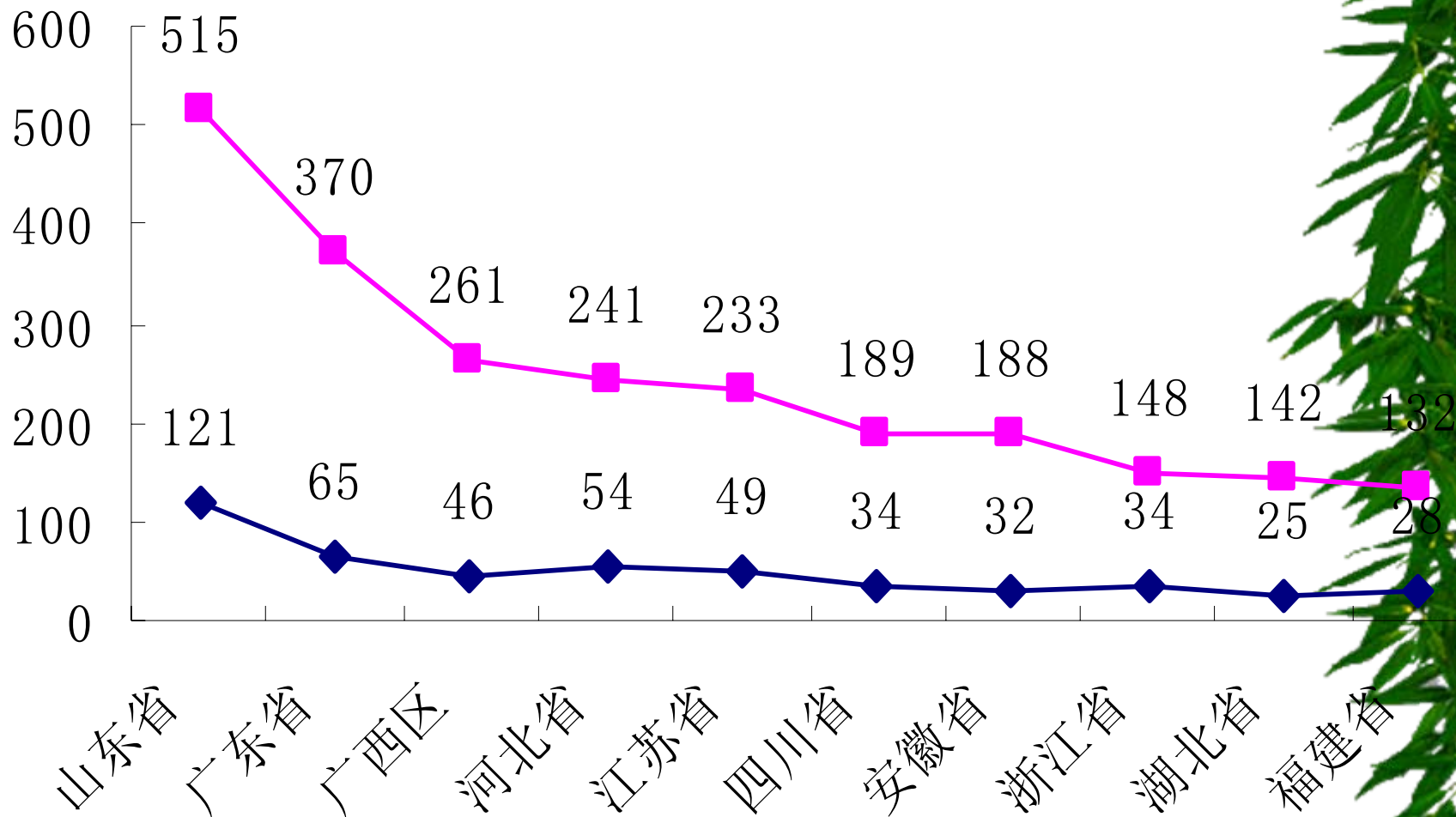


Fiberboard production capacity is strong in the east, but weak in the west of China



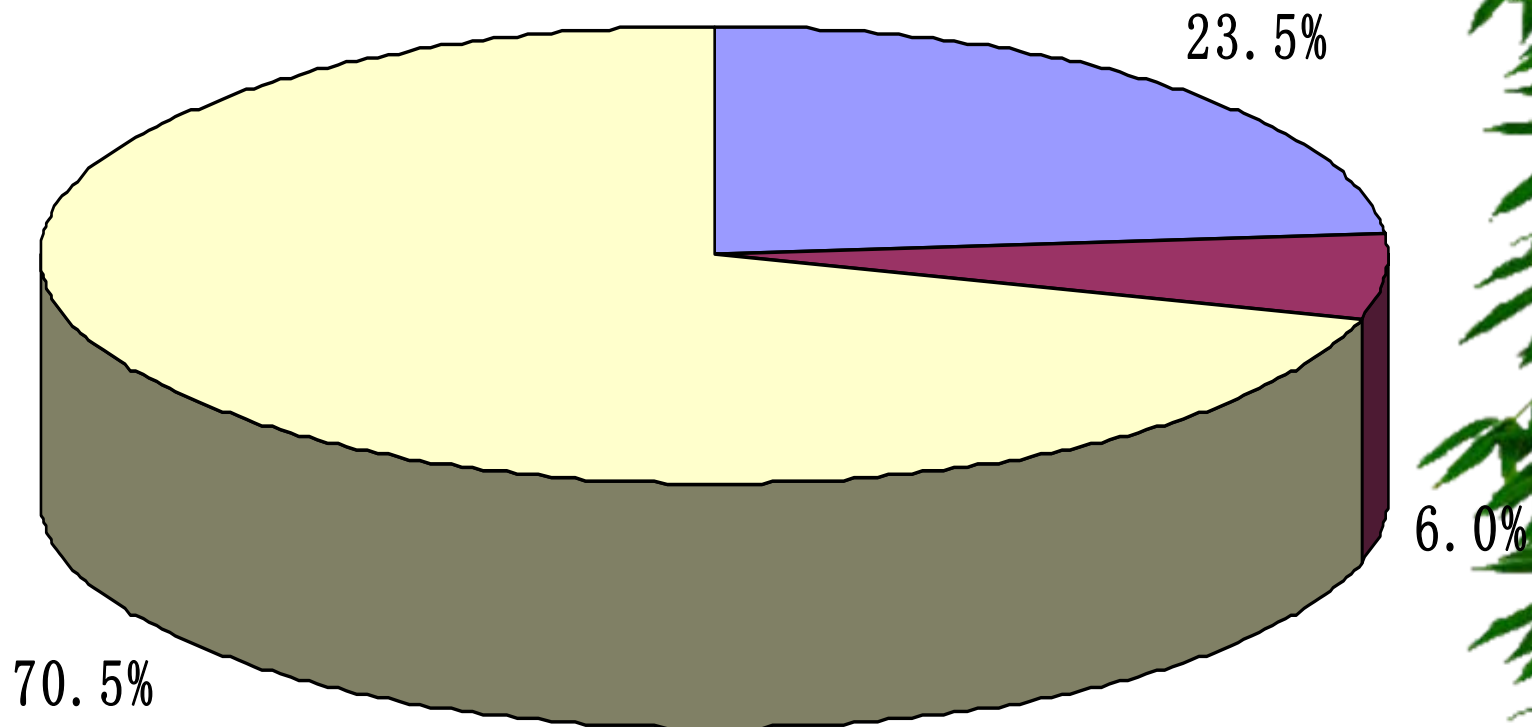
The top 10 provinces in fiber production capacity in 2009

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省区

The status of fiberboard production equipment

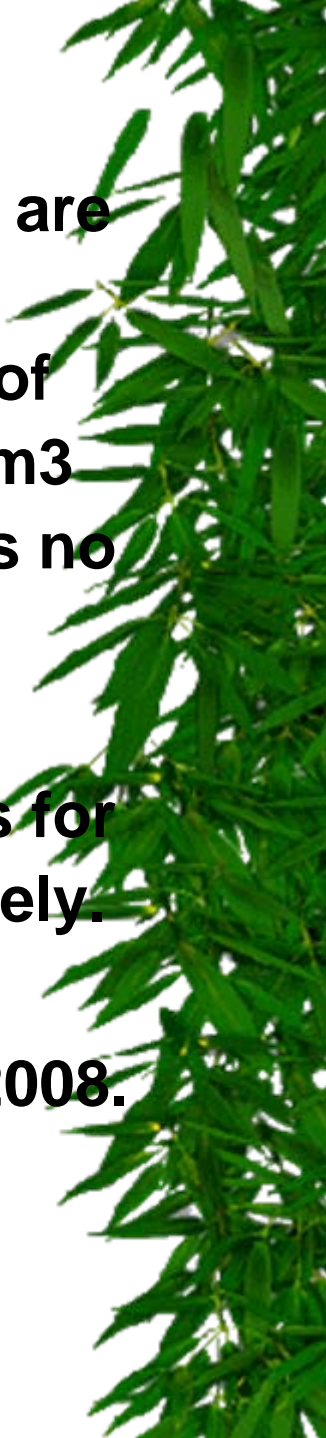


■ 连续平压 ■ 连续辊压 ■ 多层压机及其它

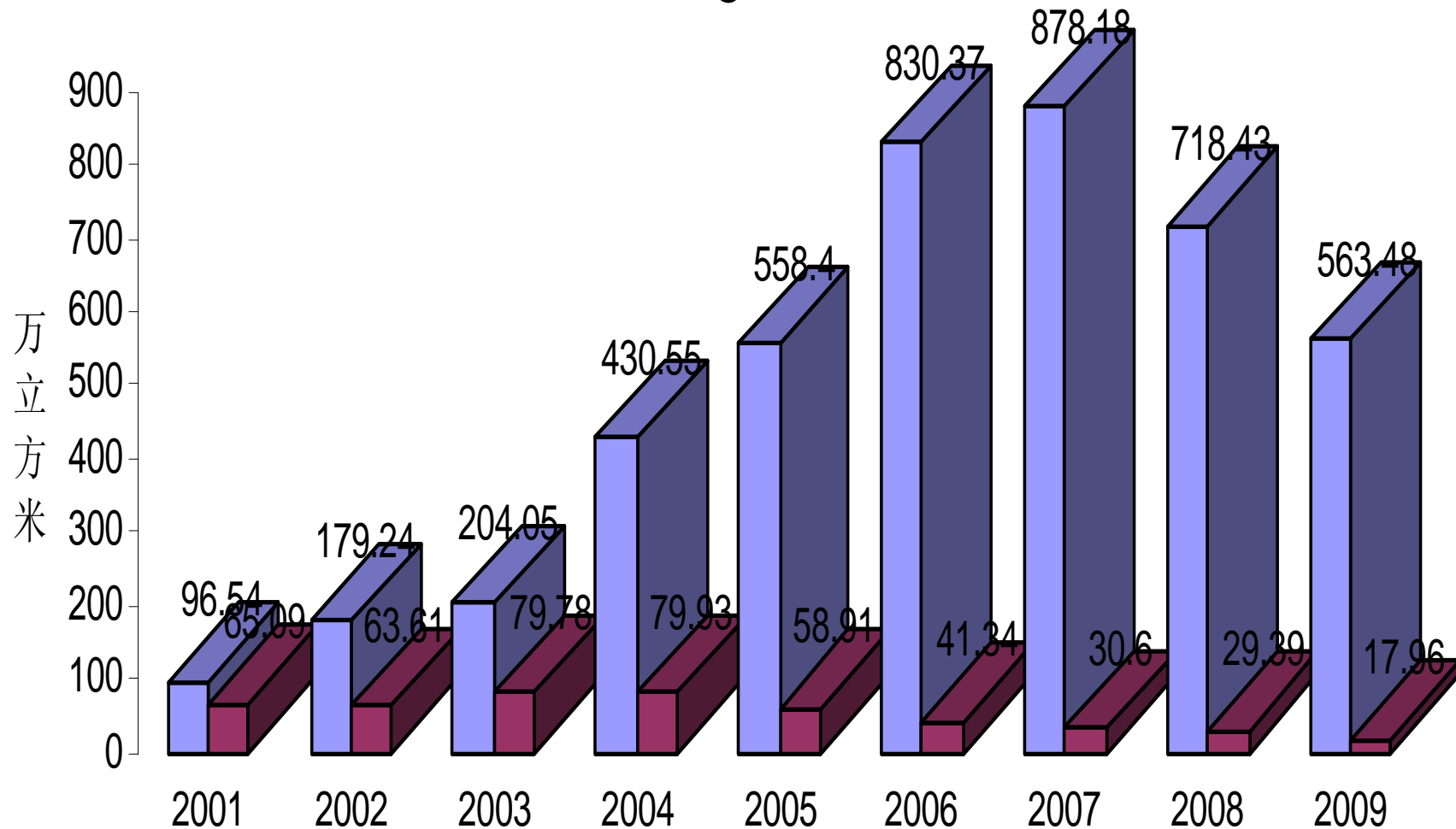
Most of the wood-based panel enterprises in China are small or medium scale with low concentration and unbalanced develop speed. The annual production of the largest manufacturing enterprise is 2.5 million m³ (ranked No. 1 in Asia) and the smallest enterprise is no more than 10,000 m³.

Wood-based panel products are greatly depend on exportation. The direct and indirect export accounts for about 10% and nearly 40% of total output, respectively.

Affected by the financial crisis, the sales of wood-based panel decreased since the fourth quarter of 2008. In 2009, the import of wood-based panel kept decreasing and declined as much as 40%.

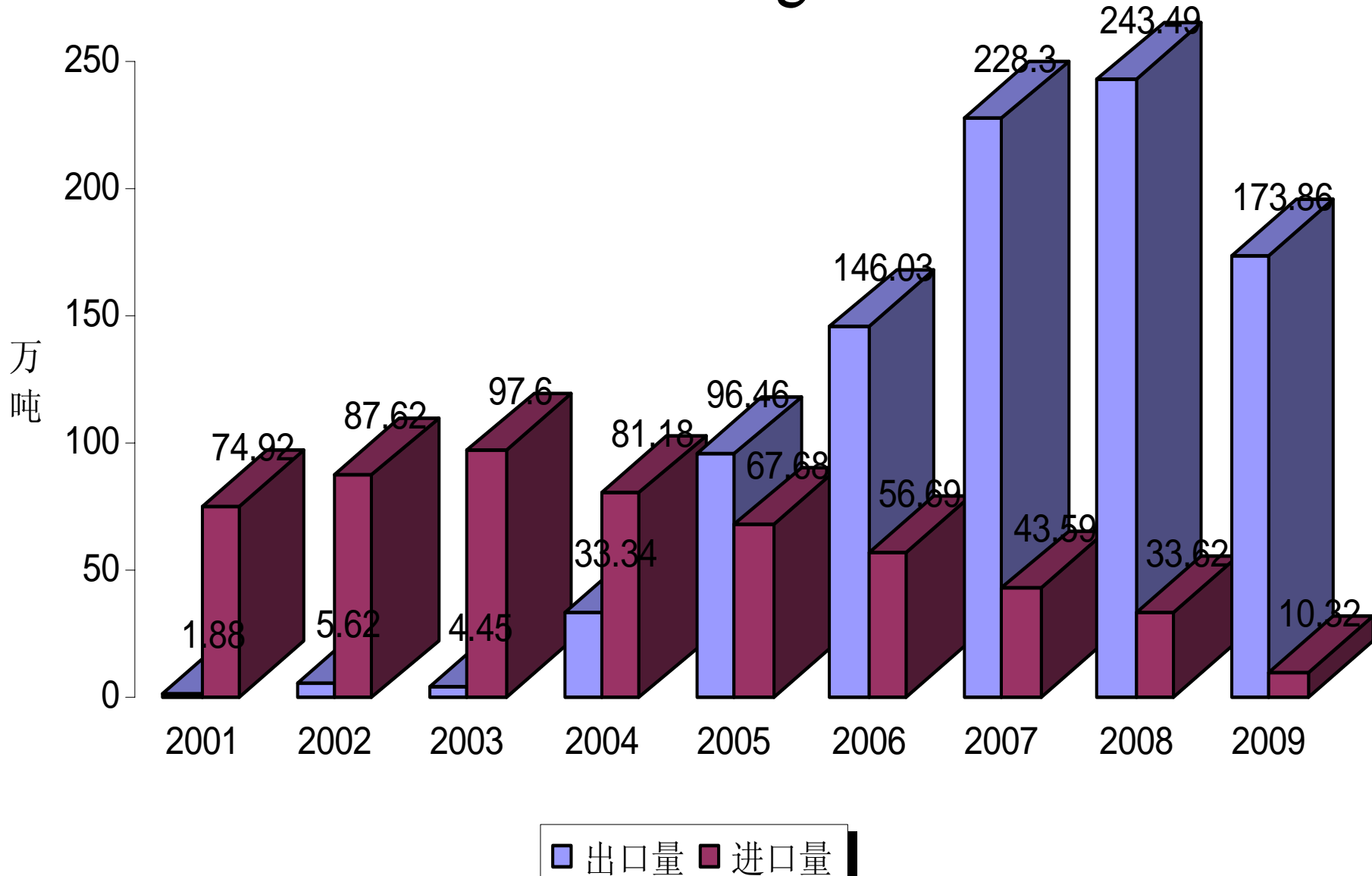


The import&export trade of plywood during 2001-2009

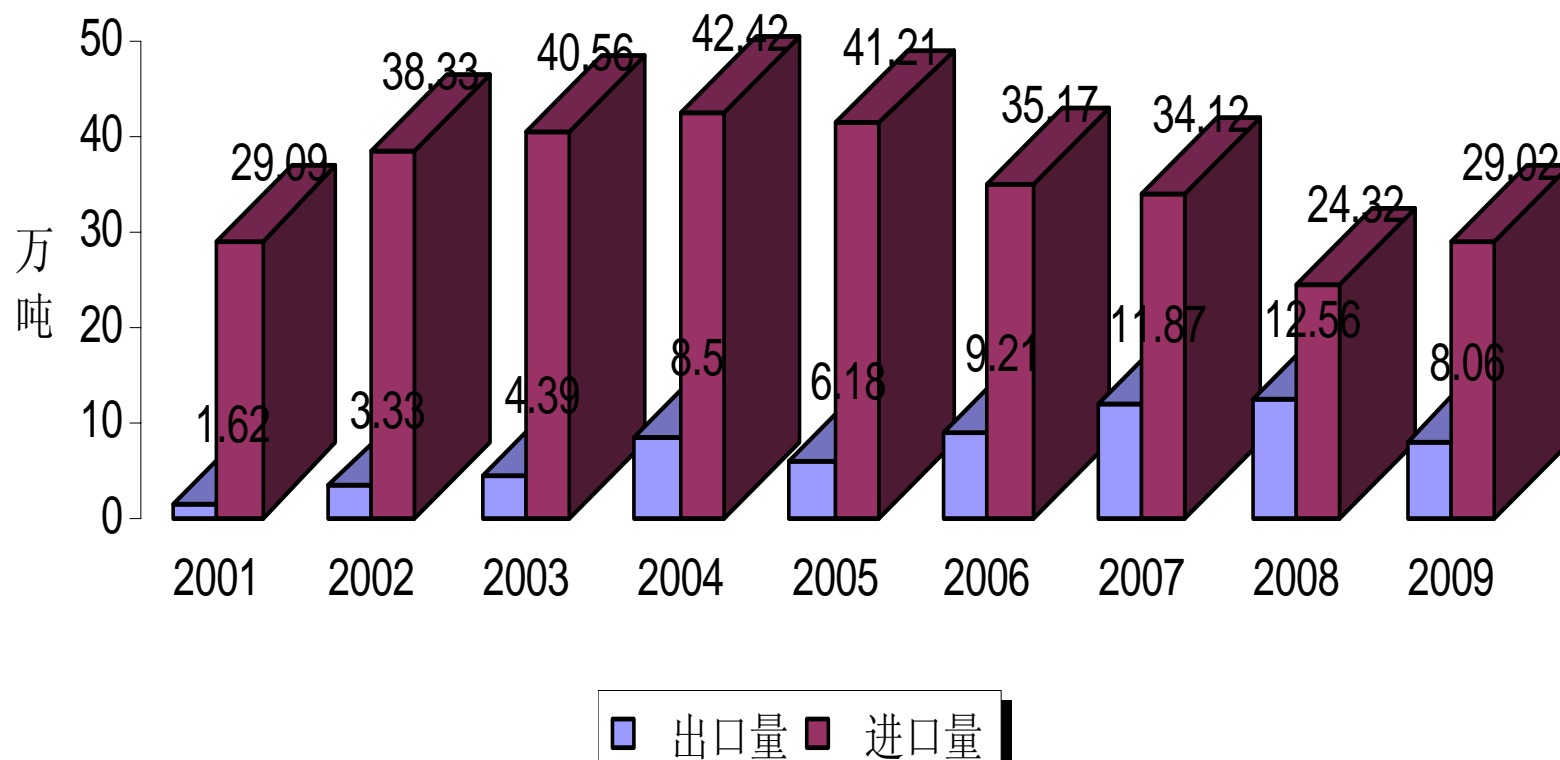


■ 出口量 ■ 进口量

The import&export trade of fiberboard during 2001-2009



The import&export trade of particleboard during 2001-2009

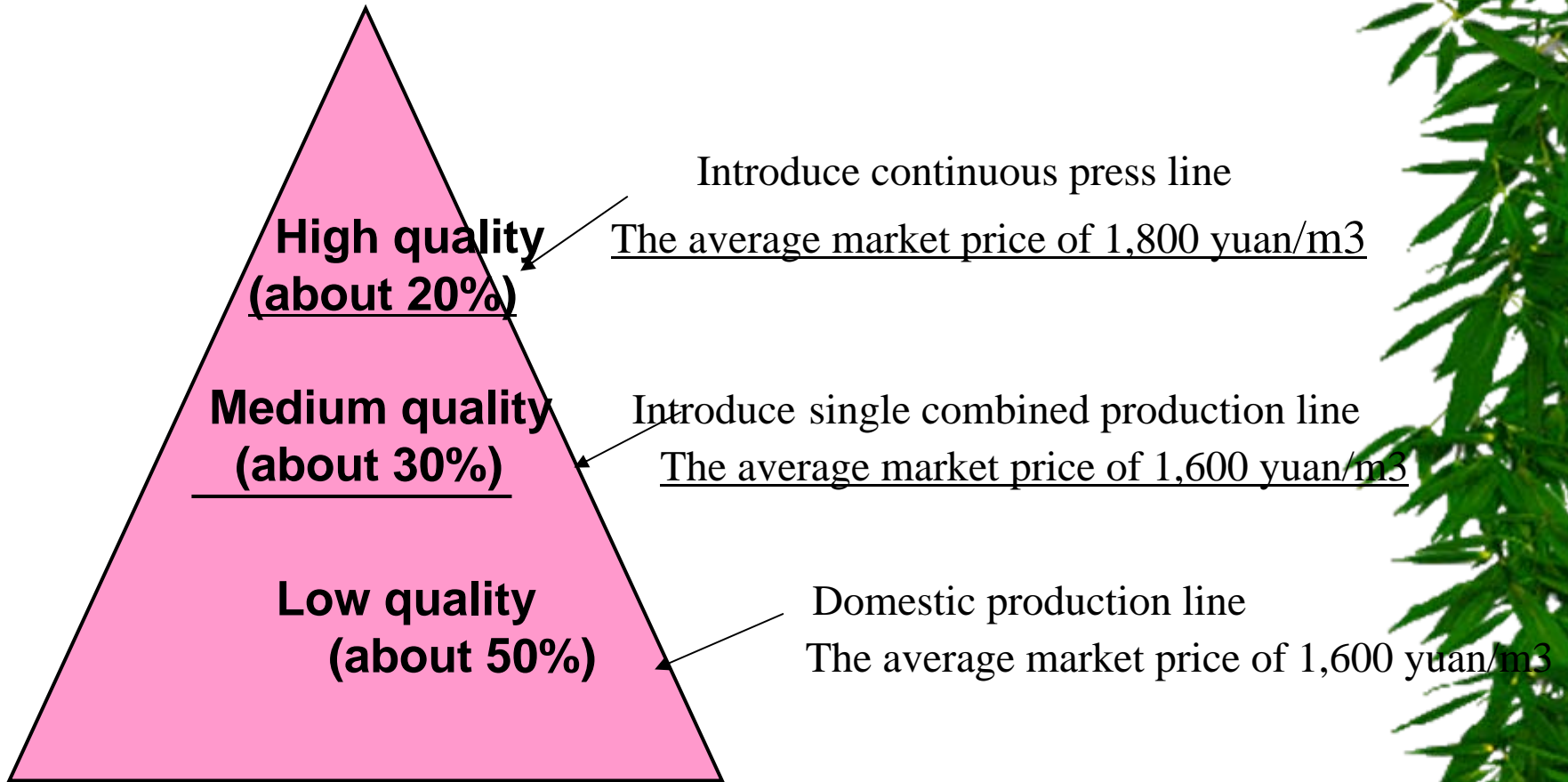


Wood-based panel sales: Guangdong in the southern China, Zhejiang and Shanghai in the east of China, Beijing and Hebei in the Northern China, Chengdu in the southwest China.

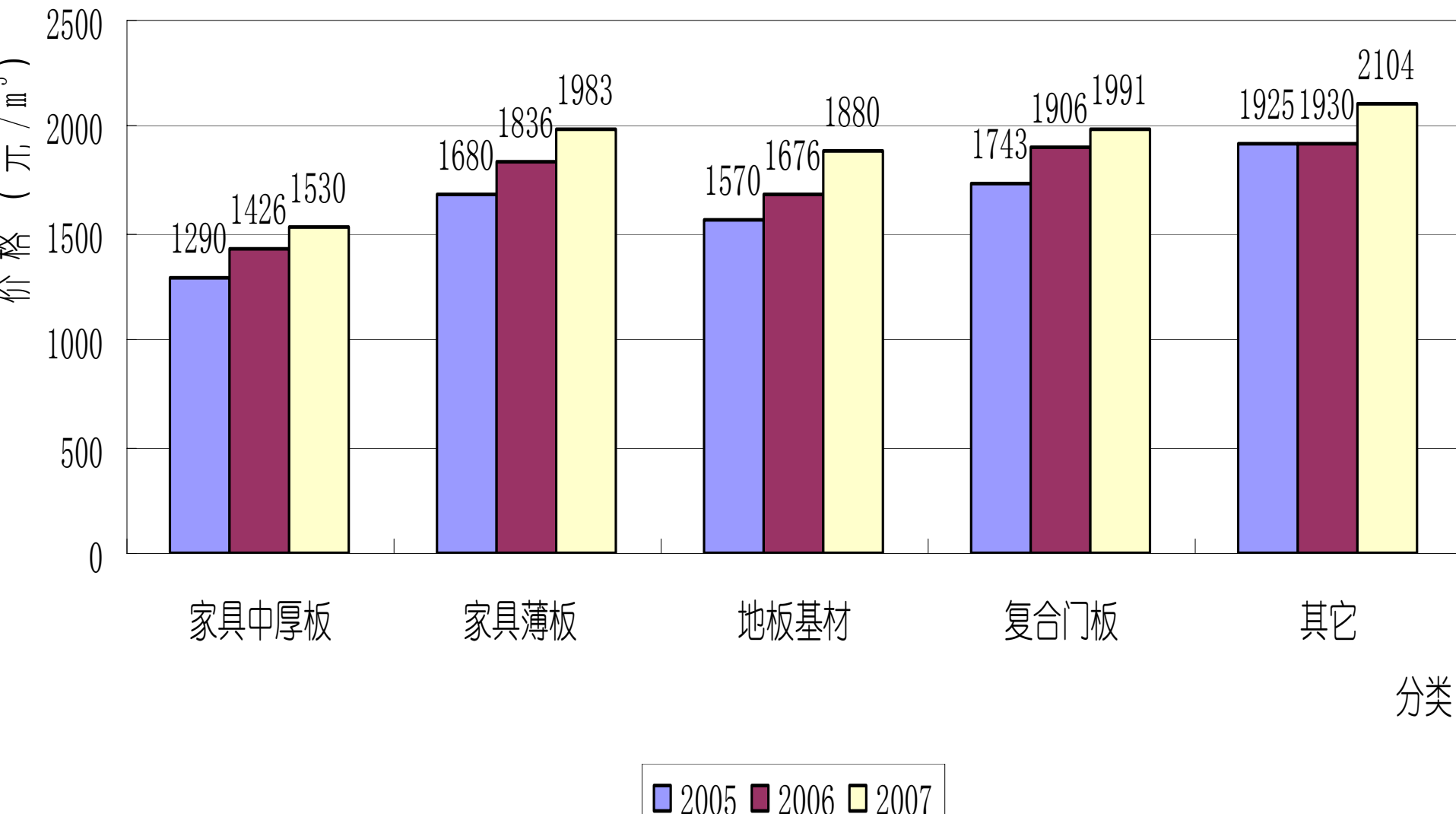
Table 1 The market price of Chinese wood-based panel (yuan / m³)

Product name	Plywood	Fiberboard	Particle board	Blockboard
Market price	1500~ 3000	1500~ 2900	800~ 1400	1500~ 2800

MDF market price system



Influenced by the increasing price of raw materials, fiberboard prices increased year after year. The price rose 6.9% in 2006 compared with 2005, and the prices increased 8.1% in 2007.

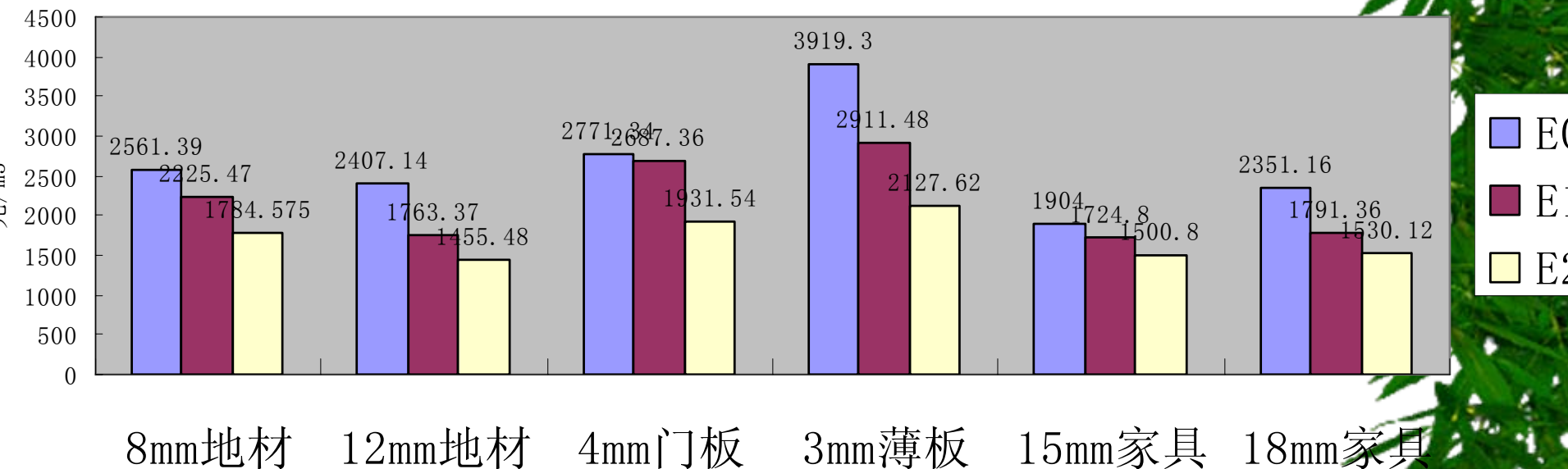


The domestic market began to recover in the second quarter of 2009. As the fitment season—the third quarter of a year, the market began to rebound and the sales of lumber went smoothly. The demands of furniture and decoration markets were increased steadily. The total product value of wood processing industry reached 360 billion Yuan.

The prices of wood-based panel in Yuzhu Market in 2009 (Yuan / m³)

Product name	Thin board (2.5-5mm)	Medium thickness board (9-25mm)	Special board (Highest price)
plywood	2550— 3050	1800— 2850	4000
fiberboard	1900— 2900	1800— 2800	
particleboard		1000— 1300	1900
blockboard		1650— 2800	

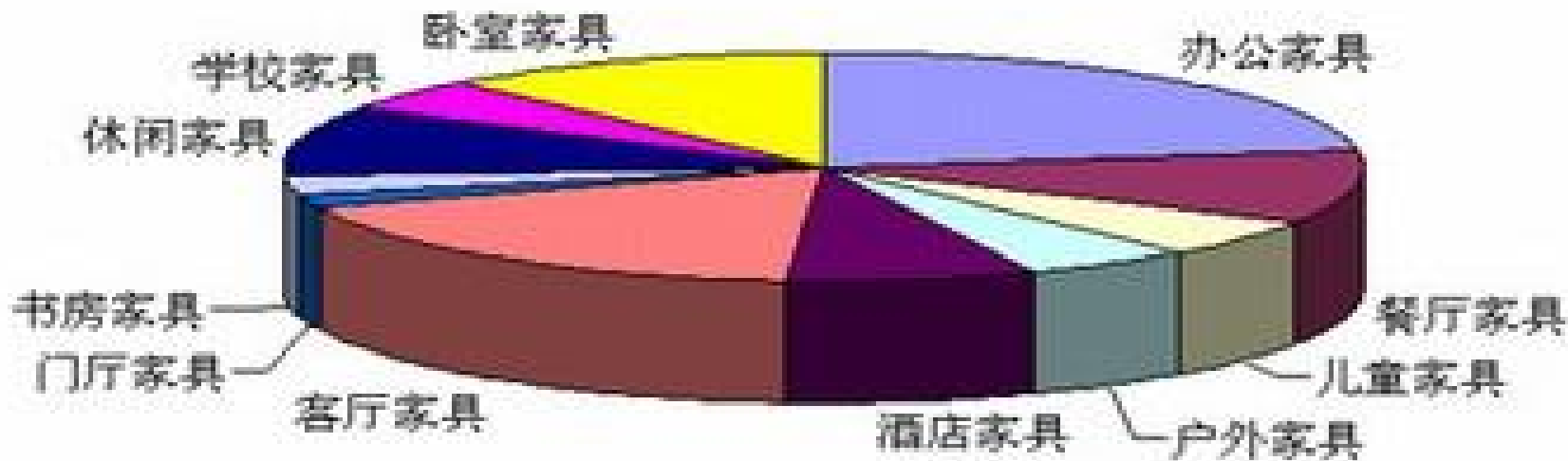
Fiberboard prices in Guangdong market in 2009



China has become the production center of global furniture industry. There are more than 50,000 enterprises with 5 million employees. However, most of enterprises are in small scale. About' There are only only 25 377 enterprises with annual output exceed 5 million yuan, 184 of which are wooden furniture enterprises with more than 200 million pieces of furniture. Besides, the panel furniture accounts for more than 80%



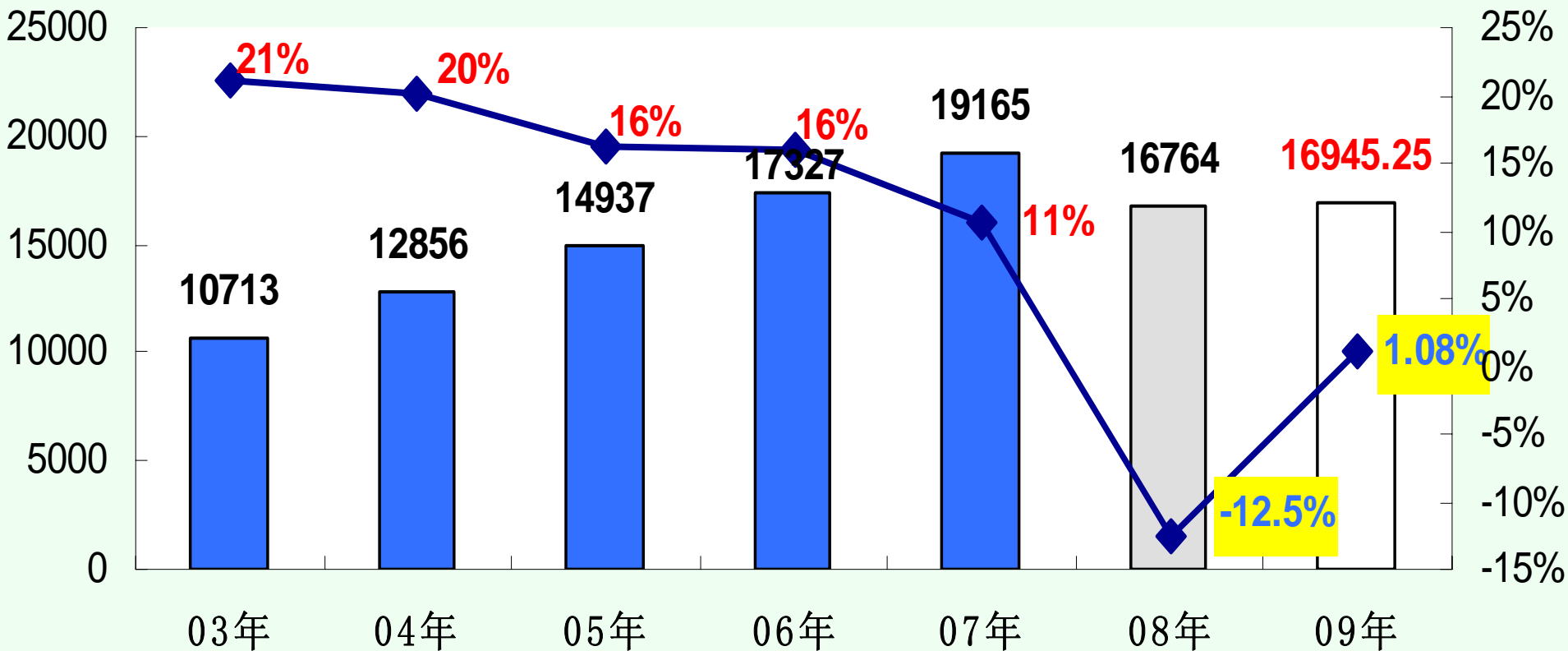
第三季度家具行业产品比例图



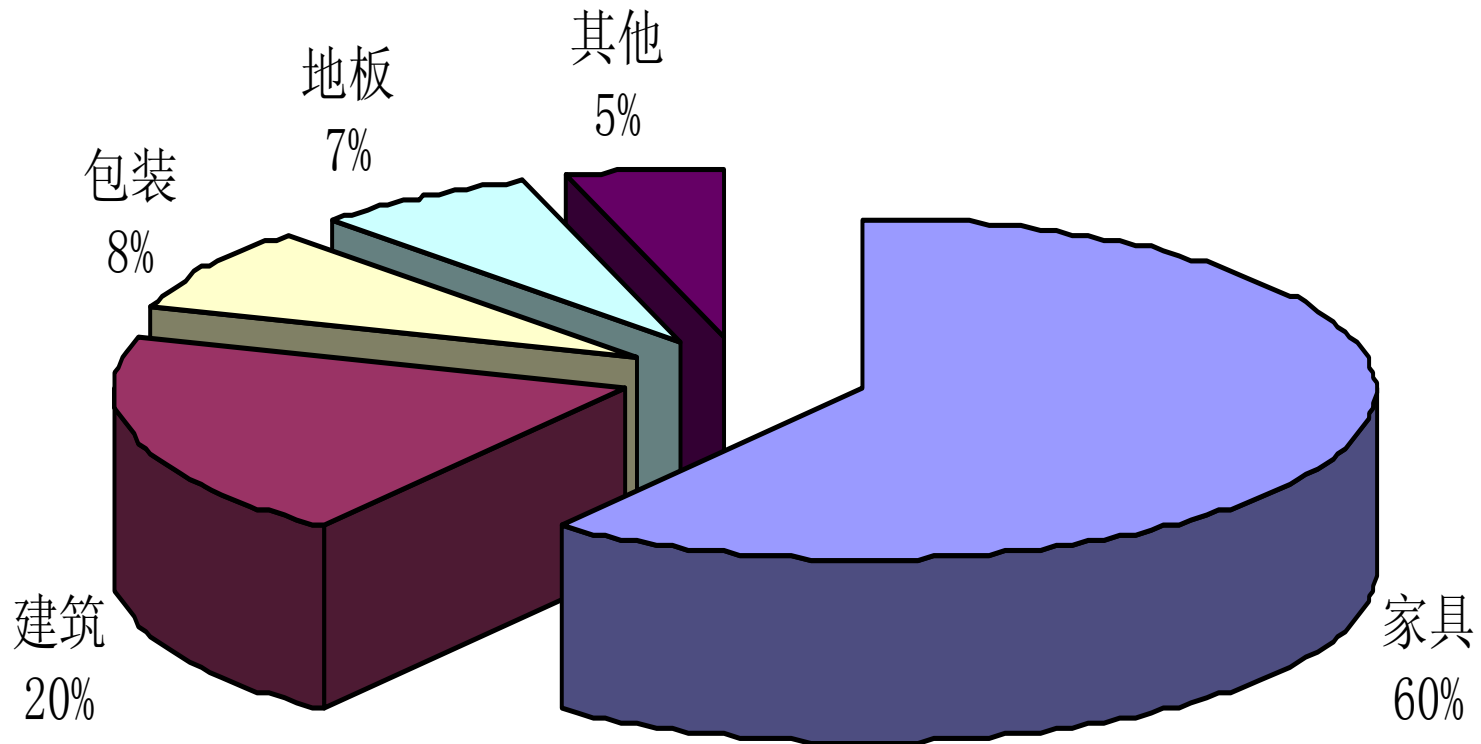
- 办公家具
- 餐厅家具
- 儿童家具
- 户外家具
- 酒店家具
- 客厅家具
- 门厅家具
- 书房家具
- 休闲家具
- 学校家具
- 卧室家具

The total furniture production value was 700 billion yuan in 2009 and accounted for 30% of the total furniture output. In 2010, the furniture industry growth is expected to exceed 12%. The export value reached \$25.3 billion in 2009 furniture exports U.S. dollars and accountd 25% of the world's total furniture imports and exports, where the proportion of panel furniture exports was about 40%.

木家具出口数量(万件) 及增幅

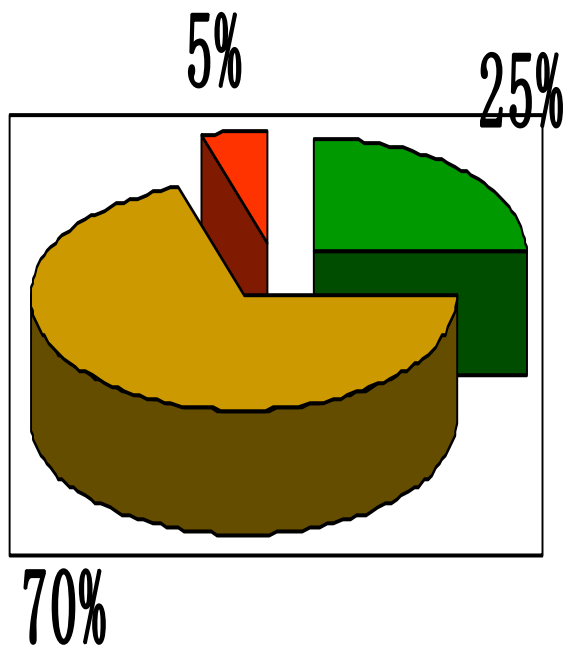


Wood-based panel is the main application fields of furniture industry

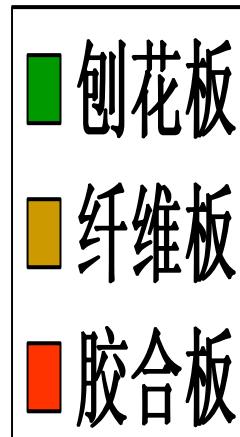
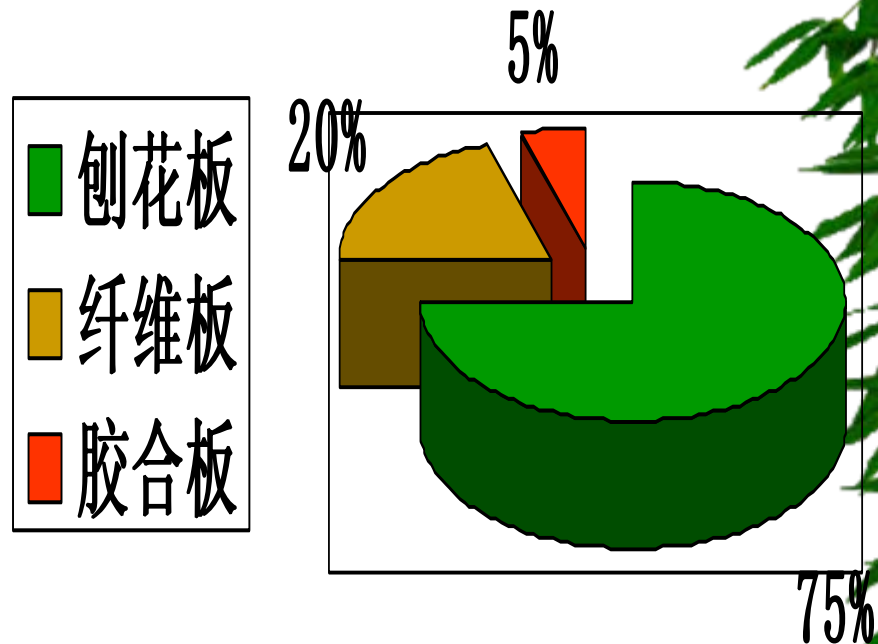


As different consume habits, the carved fiberboard are popular in domestic market and the proportion exceeds 70%. However, the foreign consumers prefer to the simple flat surface with the proportion as high as 75%.

中国板式家具基材



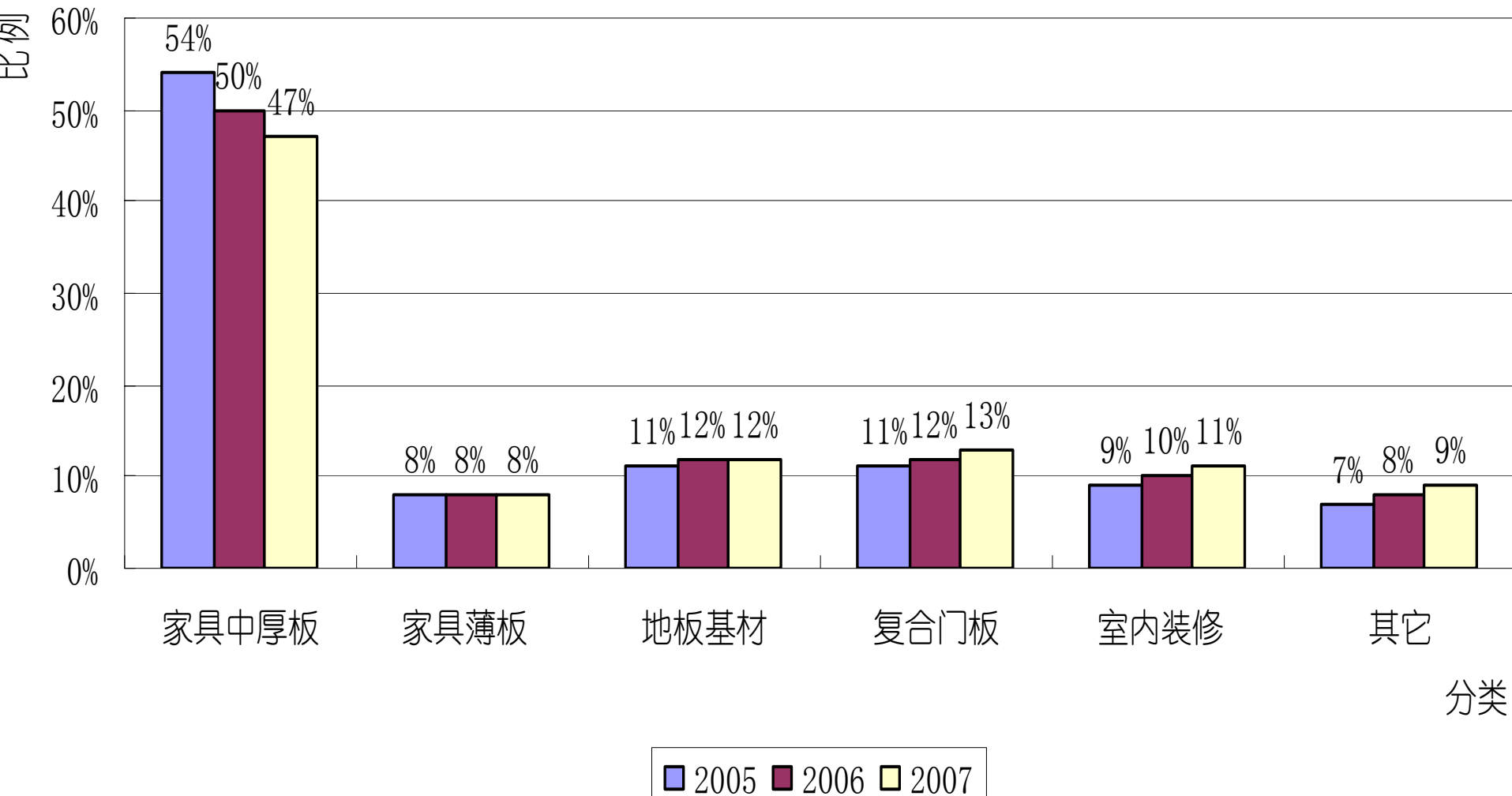
欧洲板式家具基材



The proportion of particleboard used in furniture production can reach 80%. The proportion of fiberboard furniture fell from 62% to 55%



The change of product structure in 2005-2007



As the quality improvement of domestic wood-based panel, the total applied volume of imported panels in the furniture industry behaved the decrease trends. In 2009, the imported wood-based panel accounted for 3.5% of the total volume of the domestic boards. The proportion of particleboard increased to 5.5%, whereas proportion of fiberboard decreased to 0.8%.

近两年进口板材比例

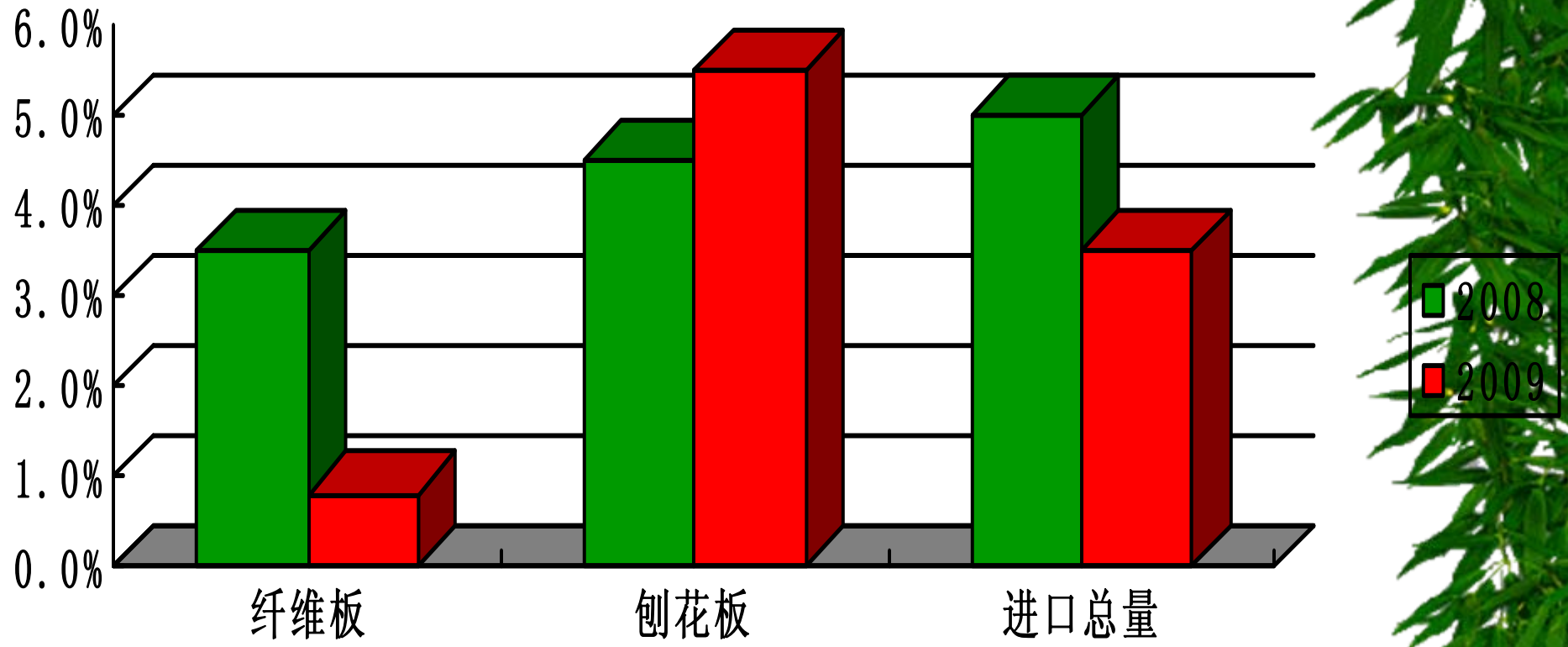


表 1 消费者购买家具的决定因素

购买因素	20—35 岁	36—45 岁	45 岁以上	购买薄木贴面家具的人
低价位	18%	20%	16%	23%
高质量	20%	23%	26%	25%
款式	16%	13%	15%	22%
更多的选择	15%	14%	11%	14%
服务态度	11%	12%	16%	8%
品牌	8%	8%	9%	7%
交货快	2%	3%	1%	2%
环保	10%	7%	11%	11%

The specific requirement of furniture industry to wood-based panel enterprises

- * Low carbon and environmental protection - consumers reject index (formaldehyde limit E0/E1)
- Stable Quality - meet physical and mechanical properties standards (Good processing performance)
 - No significant difference in the appearance (evaluate surface color difference of different batches)
- Reasonable price - cost-effective, production costs fluctuated in the controllable range
- Convenient logistics - on time, convenient, less transportation, less inventories
- Favorable services - timely and thoughtful after-sales service, purchasing flexibility, convenience settlement
- Customized specifications - to provide personalized customized products (in accordance with the design)
- Special performances –fire, moisture and mold inhibition technology
- Related Certification - the new EU timber law and EUP directive, the U.S. Lacey Act, CARB certification, FSC / COC certification, PE certification

* Furniture is composed of four elements –materials, structure, appearance and function. The product quality is the integrated considerations of materials, manufacturing processes, processing forms, demands, mechanical properties and structure

* The environmental protection of products are depends on the control of environmental indicators. One can't reduce the emission of formaldehyde by making more envelops. The most appropriate and economic means is to choose environmentally friend substrates.

* However, we can't used the high environmental performance products endlessly, because this involves the capacity for formaldehyde and other pollutants. According to the survey, no more than 20 (4' × 8') sheets E1 panel can be used in a 100 square meters space. When purchasing furniture or panels, consumers should consider the space room and volume of furniture and decorated panels. The more materials used, the more consideration of environmental performances.

The quality problems summary in half a year of a furniture enterprise

category	Defects	workshop	Defect number/period time	proportion
Substrate/technology	pressing component deformation of side process without protected paper	Machining / Woodworking	834件	9.09%
	Particleboard chipping	Machining	1480件	16.13%
	Color difference of decorated paper	Outsourcing paper pasting	1731件	18.87%
Process/	Spray paint the	Paint shop /	817件	8.90%

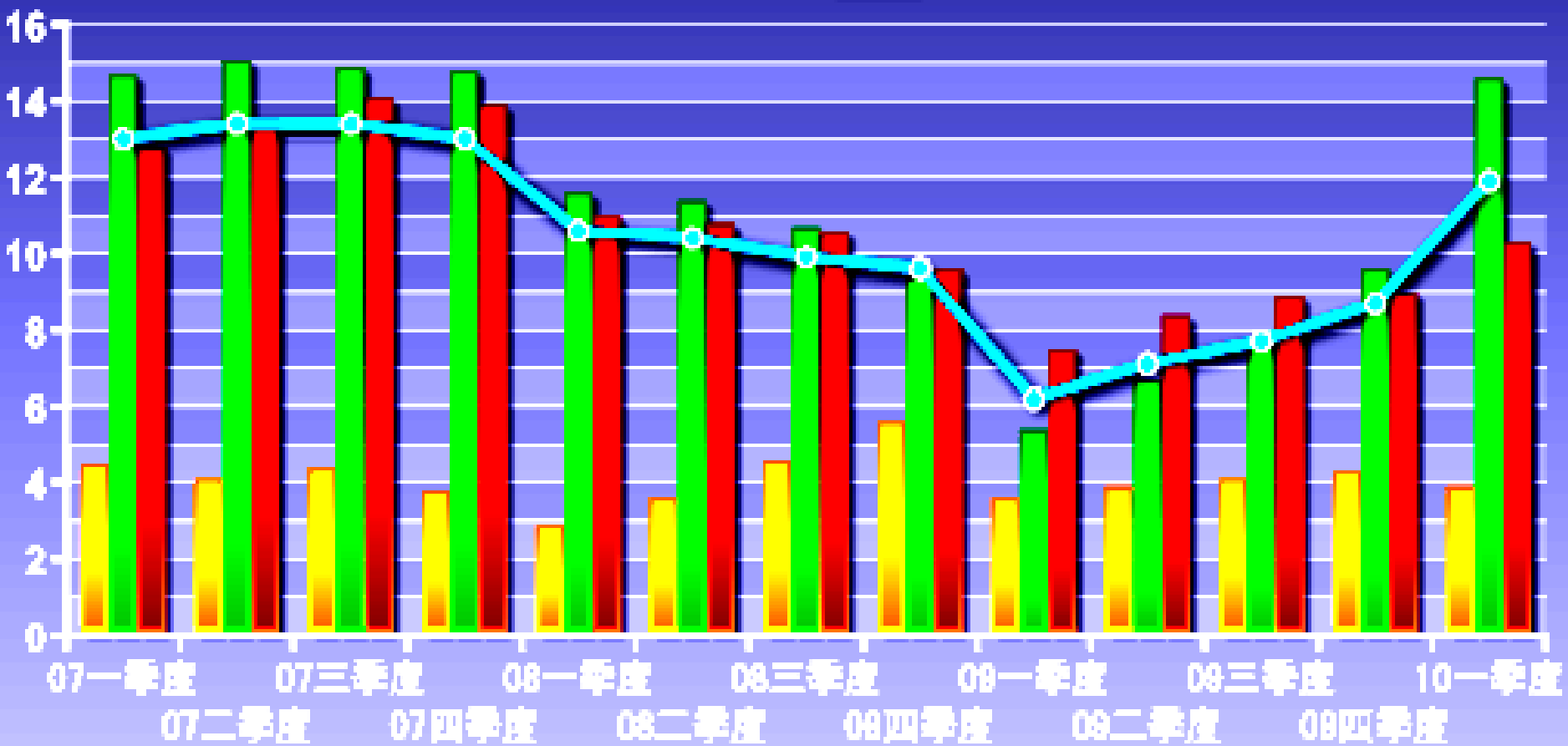


In the first quarter this year, the domestic product value is about 8.0577 trillion yuan, 11.9% increase compared with the same period of the previous year. The growth rate increase by 5.7%.

■ 中宏形势通提供

分解GDP

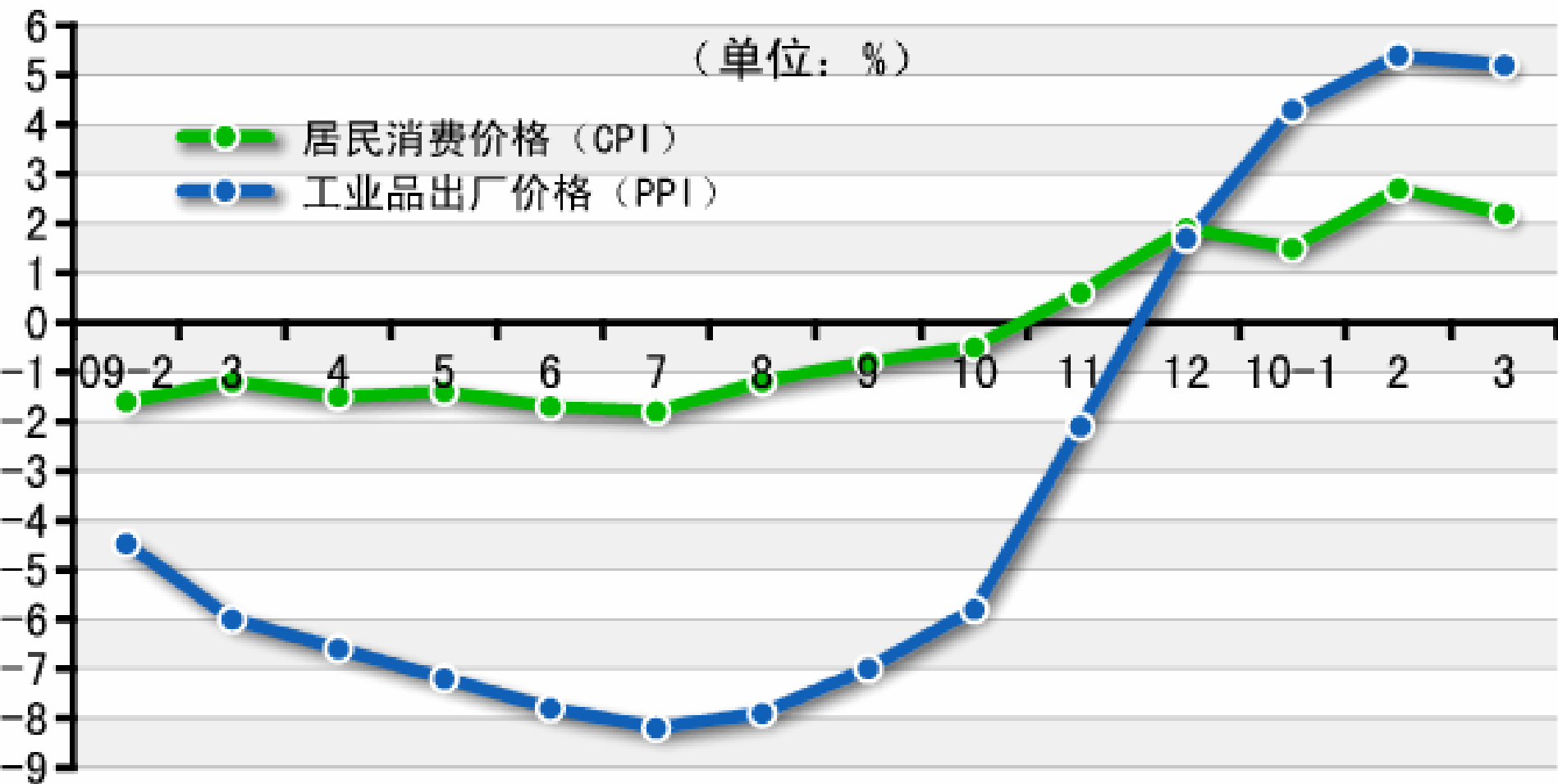
- 第一产业增加值(累计)同比增长(%)
- 第二产业增加值(累计)同比增长(%)
- 第三产业增加值(累计)同比增长(%)
- 国内生产总值(累计)同比增长(%)





In the first quarter, the consume prices rose 2.2%: where 2.1% increase in the city, 2.4% increase in rural areas. The price of industrial products increased 5.2% and raw materials, fuel and power prices rose 9.9% compared with the same period of last year.

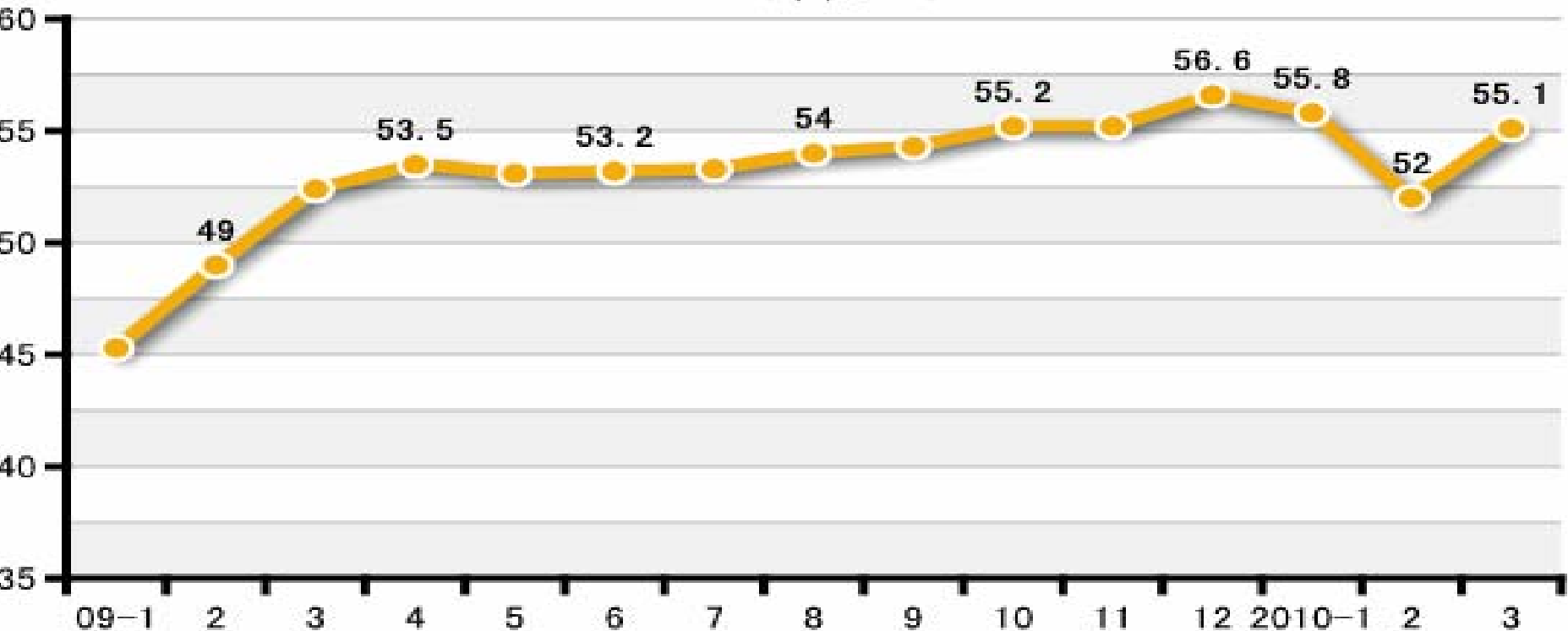
CPI 及 PPI 走势



In March 2010, China's manufacturing purchasing managers index (PMI) was 55.1%, 3.1% up compared with last month. Production index, new orders index, purchasing volume index, purchase prices index were more than 55%. Especially the purchase price index reached 65.1%.

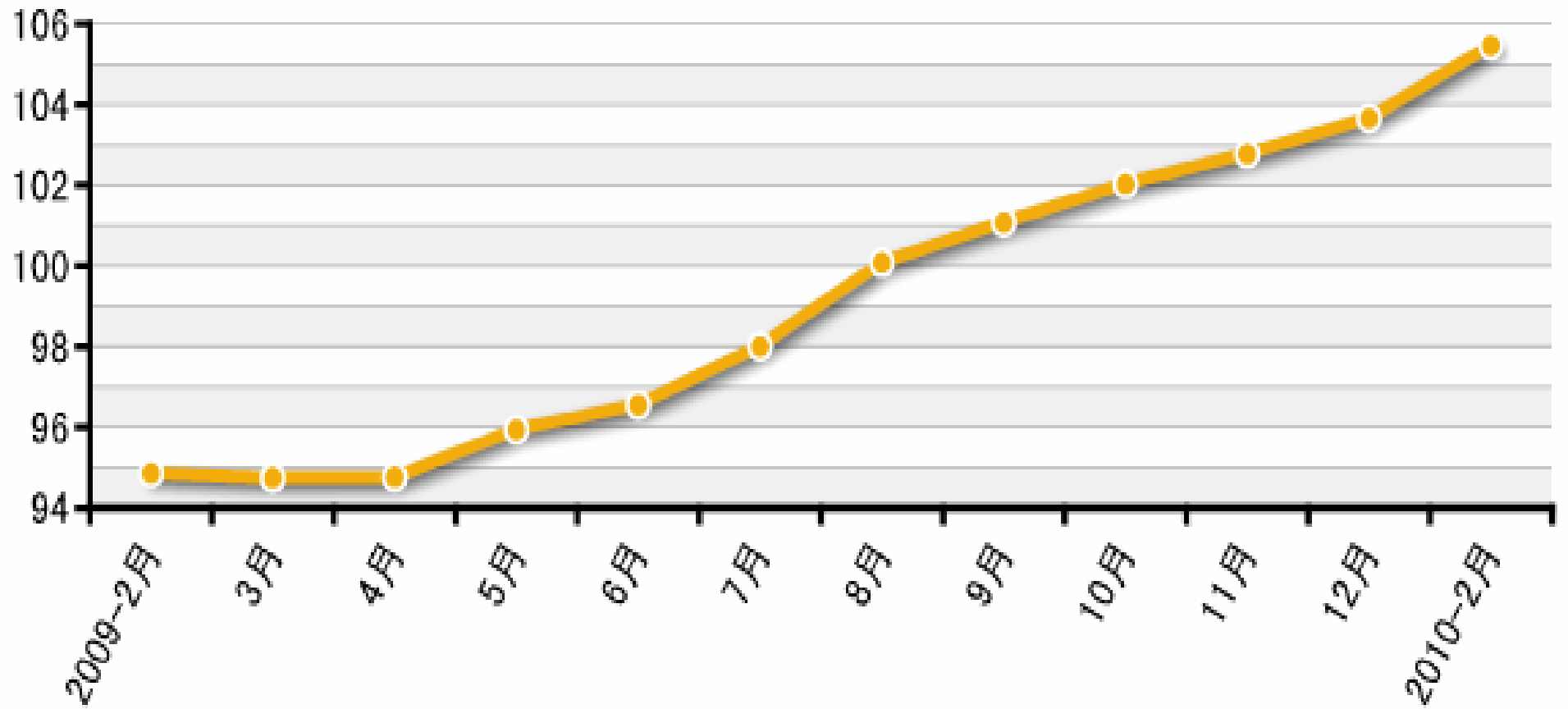
2009年以来PMI走势图

(单位: %)



The booming index of national real estate in February reached 105.47. The housing prices rose 11.7% in 70 major cities in March. The investment in real estate rose 35.1% to 6,594 billion from January to March.

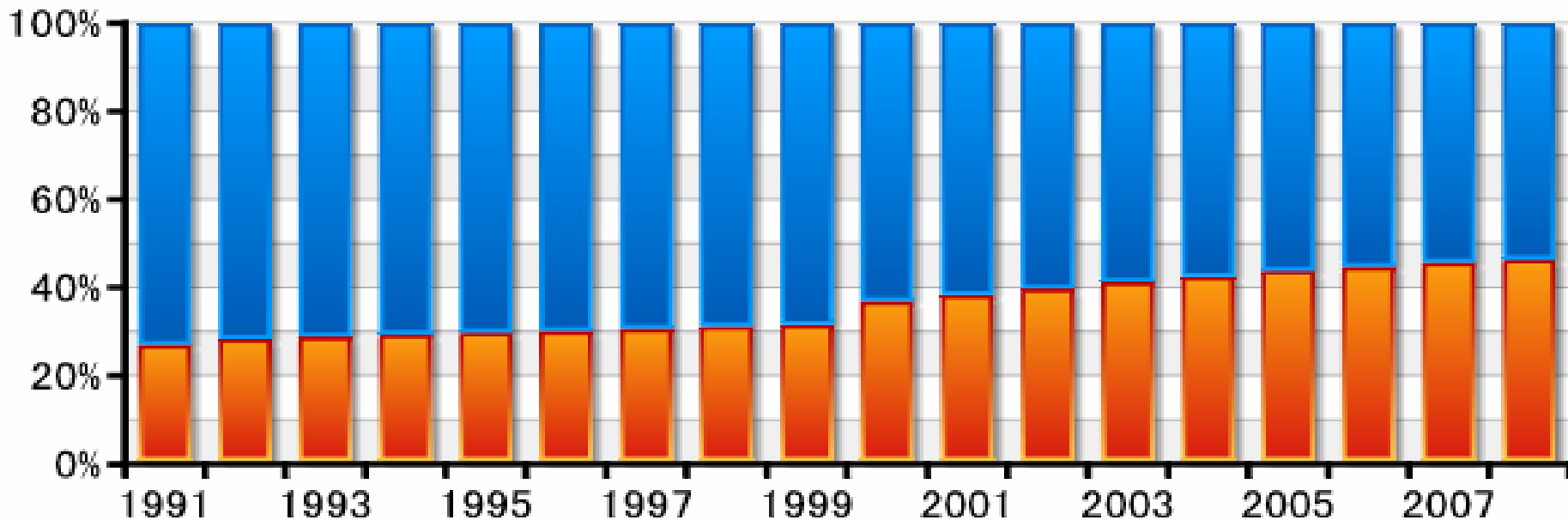
全国房地产开发景气指数趋势图



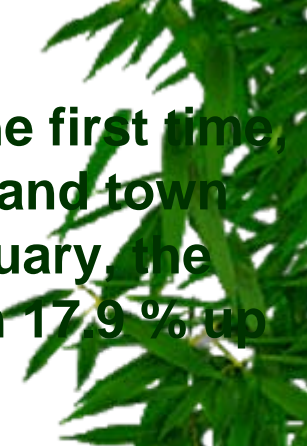
China will promote urbanization and relax the restrictions on residence registration in 2010. 12 Five-Year plan that the urbanization rate should exceed 50. Once increased 1 percent more than 10 million rural population can live, study and work in the city, which brings large-scale construction projects and consumer demand.

1991年后城镇及农村人口比例

城镇 乡村



来源：中宏数据库



In 2009, consumption growth in rural areas exceed urban for the first time, the growth rate of annual consumer goods retail sales in town and town below places was 0.2% higher than the city. In January to February, the total retail sales of social consumer goods was 2.5 trillion yuan 17.9 % up compared with same period of last year.

■ 中宏形势通提供

城乡消费的差异

- 城市社会消费品零售总额同比增长 (%)
- 县及县以下社会消费品零售总额同比增长 (%)
- 社会消费品零售总额同比增长 (%)



- * There are 720 million rural residents and 220 million farmers currently in China. 20 million of them will build new house in 2010.**
- * China has 12,000 small towns and 2,000 counties. The total family income of the 12,000 towns and villages are 50% more than that in the first and second-level cities. There are about 135 million potential affluent people, which equal to the total population of 137 million in first and second-level cities.**
- * In the next 20 years, the family in small towns and villages with total annual income exceed 35 thousand yuan is expected to increase 7.6 million yearly(7% increase), while the annual increase is 6.6 million in big and medium-sized cities(5% increase).**
- * The person who can consider the reality of rural market and satisfy the actual needs of rural consumers, then he grasps the key to win the rural market. As an responsible enterprise, if one can seriously consider the rural market, the rural market will bring 5-10 times profit in the next decade.**

Develop trends

Plywood – Many small and medium enterprises closed and the industrial consolidation was accelerated. The enterprise structure was adjusted and the industry chain was extended to both ends. The market for container floor became small and the multi-floor substrate production increased. The exports continued to decline and new fast-growing species was extend to the raw materials.

Fibreboard – The excess capacity promote the industrial reshuffle. The home-made continuous press production line accelerated equipment reformation. The enterprises began to build their own raw materials forest or cooperate with foresters to establish forest base. The new national standard force enterprises to increase investment in improving the adhesive to low-formaldehyde, formaldehyde-free direction in future products.

Particleboard – Achieved faster production growth during the past years. Enterprises are trying to improve the surface processing technology and quality, and continue to develop new products to replace imported products. The field of raw materials is continuously expanded and more urban wood waste, crop straw, bamboo and other new materials are being used .

Panel furniture industry should be divide into more parts and become more professional. While develop more selling channels.

Good product needs to be introduced into the concept of brand from the product positioning, quality, service and other aspects. Enterprises should be changed the management concept from product-centered to customer-centered, and make the target consumer orientation according to their own advantages.

In recent years, the fast furniture industry development in Sichuan is due to the brave exploit of secondary and tertiary markets. When facing the this vast group of consumers, the way to provide tailored services and products is smart action.

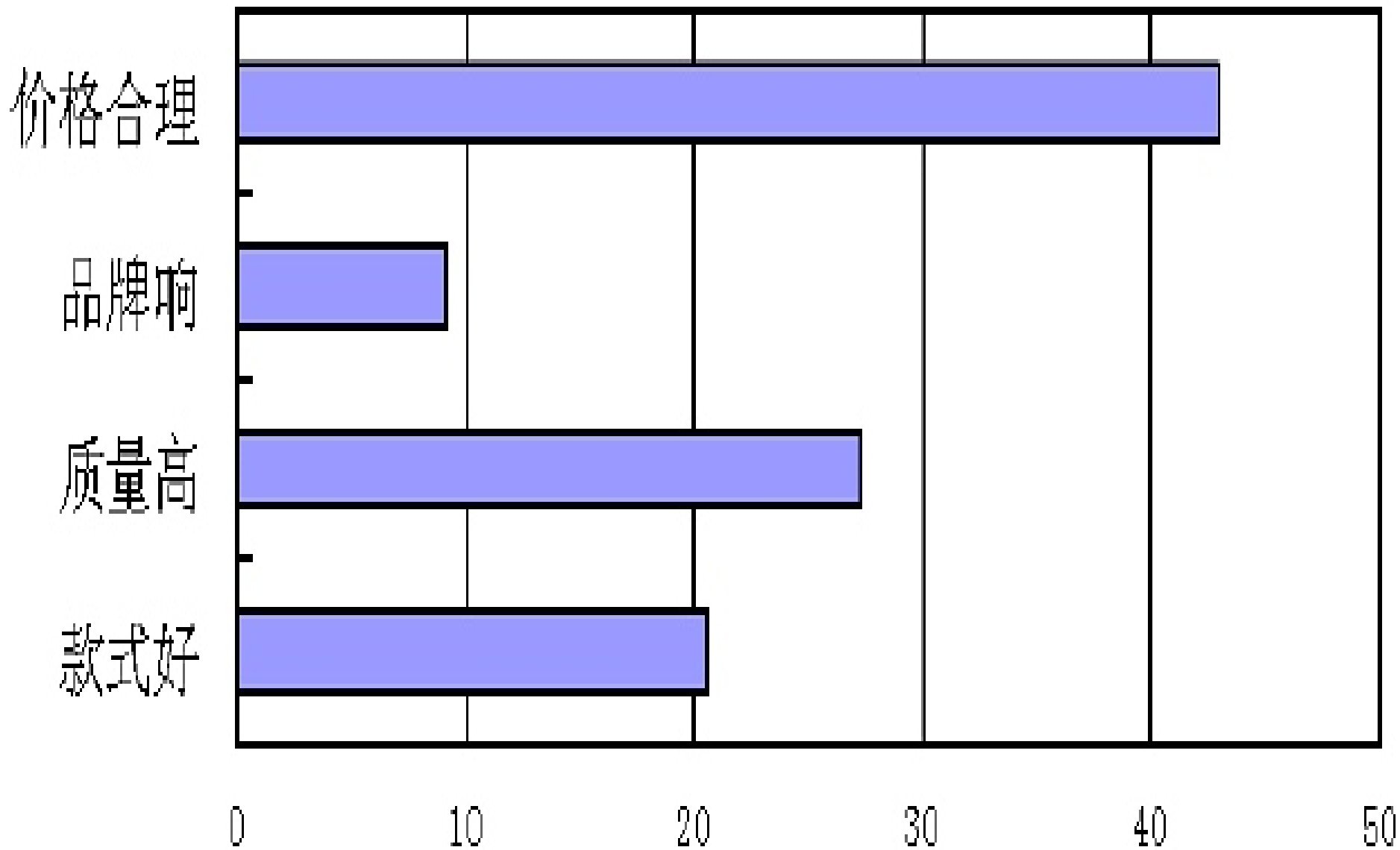


图1 消费者对川产薄木贴面家具优势的看法

As the furniture industry is facing resources scarcity and costs rising, the product design innovation should be emphasis on the application of new materials, new processes, new technologies.

- * Combine mass production with customization to realize the scale production of personalized**
- * Use modern information technology to deal with the differentiated, non-standard customized furniture to solve the conflict between customization and mass production. With the help of bar code, make the customized products become more scale to improve productivity and reduce manufacturing costs,**
- * With the help of network technology, change the traditional furniture and decoration industries to systematic industrial design, extend single furniture customized to a full house decoration.**



The national strategies and policies of expanding domestic demand, protecting growth, adjusting structure and emphasizing on people's livelihood are good to steadily develop of wood-based panel and furniture industries.

In the next 3 to 5 years, Chinese wood-based panel industry will show a diversified pattern. The industrial structure will adjust from only expand production capacity to high quality and efficiency.

Furniture industry is in a transition period from Chinese-made to Chinese-created, that also means transfer from the quantity to the quality, from extensive to intensive management, from simple to modern industrialization and from a labor-intensive to technology-intensive.



With the push of policies and multiple capital sources, more and more companies will change from single production to integration of board and forest“6 +1” industrial chain through combination, extending scale and industrial chain. While change the enterprise management from products management to the converge of asset and capital management platform.

Low-carbon, green, sustainable will be the key words in 2010. New energy, new materials and low-carbon economy is the develop trend of Chinese wood industry.

The furniture industry should pay more attention to the rural market, accelerate the growth transformation, strengthen brand awareness and persist in independent innovation, promote the formation of competitive advantage of scientific and technological progress, resource saving, environment-friendly features. Finally promote the sustainable development of the industry.

Thank you

