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RESEARCH ARTICLE

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Import analysis of China's major timber products in 2004

Abstract Timber import is an important and integral part of China's timber trade. According to different kinds of product type, this paper analyzes its import in 2004 separately; based on the conditions of China's timber import trade in 2004, this paper finds out some existing problems and puts forward corresponding countermeasures.

Keywords timber, import, extent of import reliance

1 Introduction

Driven by the interior power of domestic economy, robust growth of world economy and effective macro-control, China's economy continued to maintain sustained, healthy and rapid growth in 2004. Consequently, gross national product (GNP) amounted to 13.65×10^{12} RMB, increasing by 9.5% as compared with 2003; total fixed assets investment reached 2.64×10^{12} RMB, increasing by 25.8%; foreign trade value came up to 1.15×10^{12} USD, increasing by 35.7%, with trade surplus of 32×10^{9} USD. Among total commodity trade, timber trade scale still took up an expanding trend, which reflects China's huge demand for timber. Estimated by some experts, China's timber consumption had reached 0.3×10^{9} m^3 in 2004. In the backdrop of the national forest protection program (NFPP), the scarcity of forest resources in China becomes more and more obvious, which is in contrast to the increasingly expanding demand for timber. However, the supply-demand equilibrium of China's timber market was not interrupted because of the domestic scarcity in forest resources in the recent years. The basic reason lies in that timber trade, especially import trade, is playing an important and integral role in filling up domestic supply-demand gaps and alleviating structural market contradictions (Song, 2005). Therefore, grasping the characteristics of China's import in time and probing into its existing problems are very significant for China in order to be part of the international timber allocation process and to alleviate domestic pressure on timber supply.

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2 Import analysis of China's major timber products in 2004

2.1 Log import

In 2004, China's log import volume amounted to 26.31×10^{6} m^3 and import value reached 2.80×10^{9} USD, increasing by 3.35% and 14.59%, respectively, as compared with 2003 (see Table 1). The import volume and value of coniferous log rose to 16.0×10^{6} m^3 and 1.17×10^{9} USD, respectively, increasing by 6.55% and 23.63% as compared to that in 2003. The import volume of broadleaf log dropped to 10.30×10^{6} m^3, dropping by 1.25%, while the import value of broadleaf log amounted to 1.64×10^{9} USD, increasing by 8.91% (Report on China's forestry development of 2005). From the perspective of major suppliers, Russia still played the dominant role in China's total log import, which accounted for nearly 64.84%; the other four top leading

Table 1 Import data of China's major timber products in 2004

	Volume	Value /($\times10^{9}$ USD)
Log	26.31 /($\times10^{6}$ m^3)	2.80
Sawnwood	6.05 /($\times10^{6}$ m^3)	1.38
Veneer	0.15 /($\times10^{6}$ m^3)	0.11
Plywood	0.8 /($\times10^{6}$ m^3)	0.38
Fiberboard	1.38 /($\times10^{6}$ m^3)	0.27
Particleboard	0.65 /($\times10^{6}$ m^3)	0.12
Paper and paperboard	6.14 /($\times10^{6}$ t)	3.94
Pulp and recovered paper	19.62 /($\times10^{6}$ t)	5.29

Source: Report on China's forestry development of 2005

suppliers were Malaysia, Papua New Guinea, Myanmar and New Zealand, making 10.34%, 5.00%, 4.01% and 3.18%, respectively.

The rapid growth of coniferous log import was mainly driven by China's fast fixed asset investment in 2004, which induced the demand for construction wood-based materials, such as Russia's white pine, Mongolia pine and New Zealand's radiate pine. Due to China's robust demand plus the increasing shipping freight and inspection cost, the average import price of coniferous log jumped to 73.01 USD/m^3, increasing by 16.02% as compared with 2003. For example, the price of white pine climbed from 60.58 USD/m^3 in 2003 to 73.76 USD/m^3 in 2004; the price of radiate pine climbed from 65.24 USD/m^3 in 2003 to 92.62 USD/m^3 in 2004.

The decline of broadleaf log import in 2004 was mainly ascribed to the decreasing supply of international broadleaf log plus the depreciation of USD and the increasing price of international oil. Firstly, due to growing ecological pressure and the promotion of the domestic timber industry, many traditional timber exporting countries, such as Indonesia, Myanmar, etc., began restricting the export of tropical broadleaf log. Secondly, influenced by the tsunami in the Indian Ocean, the supplying ability of some traditional exporting countries is deteriorating. Thirdly, the average import price of broadleaf log jumped from 143.66 USD/m^3 in 2003 to 158.74 USD/m^3 in 2004. From the perspective of concrete species, the import price of Red lauan increased by 5.8%, Merbau and Okoume increased by 4.48% and 13.23%, respectively. The existence of the abovementioned factors together led to a slight drop in the broadleaf log import volume and to a large rise in the import value.

2.2 Sawnwood import

In 2004, China imported sawnwood about 6.05×10^6 m^3 in sum, increasing by 8.10% as compared with 2003, and the corresponding import value amounted to 1.39×10^9 USD, increasing by 15.71%. Consequently, the import volume and value of coniferous sawnwood were 1.75×10^6 m^3 and 0.29×10^9 USD, increasing by 19.6% and 34.16%, respectively, as compared with 2003; the import volume and value of broadleaf sawnwood were 4.31×10^6 m^3 and 1.10×10^9 USD, up by 4.05% and 12.08%, respectively, than what it was in 2003 (Report on China's forestry development of 2005). From the perspective of supplying countries, Indonesia took up the top role in China's total sawnwood import, which accounted for nearly 16%; the other four leading suppliers were Thailand, Russia, USA and Canada, accounting for 13.78%, 13.34%, 12.93% and 7.26%, respectively.

The rapid growth of coniferous sawnwood import in 2004 was mainly driven by China's fast fixed asset investment. Growing domestic demand for construction materials led to the rise in the import price of coniferous sawnwood. In 2004, the average import price of coniferous sawnwood floated to 163.50 USD/m^3, increasing by 9.68% as compared with 2003. From the perspective of concrete species, there exhibited different rising extent. For example, white pine sawnwood rose by 12.79% while Mongolia sawnwood and radiate sawnwood rose by only 6.8% and 3.69%, respectively.

Broadleaf sawnwood has always been taking up dominant share in China's sawnwood import. In 2004, this share increasingly amounted to 71.15%. The continual growth of broadleaf sawnwood import was mainly ascribed to rigid demand for superior broadleaf sawnwood in the construction and decoration field. It is worth mentioning that the tropical broadleaf sawnwood, accounting for 75% of China's total broadleaf sawnwood import, especially fell short of demand. At the same time, due to the restrictive harvest of tropical broadleaf log worldwide, its supply obviously decreased. Thus, the weak supply and robust demand together pushed up the import price of broadleaf sawnwood, i.e., it jumped from 216.01 USD/m^3 in 2003 to 255.86 USD/m^3 in 2004. From the point of view of concrete species, there exhibited different rising extent. For instance, Red lauan increased by 15.06% while Merbau only rose by 1.79%.

2.3 Veneer import

In 2004, China imported veneer about 0.15×10^6 m^3 in volume and 0.11×10^9 USD in value, decreasing by 31.02% and increasing by 14.58%, respectively, as compared with 2003. Therefore, import volume and value of coniferous veneer were 0.018×10^6 m^3 and 0.012×10^9 USD, decreasing by 33% and increasing by 20% separately as compared with 2003; import volume and value of broadleaf veneer amounted to 0.037×10^6 m^3 and 0.028×10^9 USD, decreasing by 13.9% and increasing by 33.3%, respectively, as compared with 2003; and other veneer was imported about 0.099×10^6 m^3 in volume and 0.07×10^9 USD, 1.22% and 9.4% more than in the year 2003. In the case of import price, the average import price of veneer climbed from 427.66 USD/m^3 in 2003 to 713.82 USD/m^3 in 2004, increasing by 66.91% (Report on China's forestry development of 2005).

As seen above, veneer import volume in 2004 dropped by a larger extent while import value rose by a small extent. This just illustrates that China's international competitiveness as far as coniferous veneer is concerned has improved gradually; on the other hand, in the case of superior veneer, such as tropical broadleaf veneer, due to severe scarcity of tropical broadleaf log plus the robust demand for plywood veneer and decoration veneer, China has to rely greatly on the international market and thereby must endure a higher import cost.

2.4 Wood-based panel import

Wood-based panel mainly includes plywood, fiberboard and particleboard. In 2004, China imported plywood about 0.80×10^6 m^3 in volume and 0.38×10^9 USD in value,

decreasing by 0.58% and increasing by 8.17%, respectively, as compared with 2003. Import volume and value of fiberboard were about 1.38×10^6 m^3 and 0.27×10^9 USD, respectively, dropping by 1.23% and 14.95% in comparison to the values in the year 2003. Import volume and value of particleboard amounted to 0. 65×10^6 m^3 and 0.12×10^9 USD, rising by 4.58% and 8.85%, respectively, as compared with 2003. In the case of import price, in 2004, plywood's import price climbed to 480.77 USD/m^3, increasing by 8.01% than what it was in 2003; import price of fiberboard and particleboard were 198.05 USD/m^3 and 188.78 USD/m^3, respectively, rising by 5.11% and 4.04% as compared with 2003 (Report on China's forestry development of 2005).

In 2004, China's plywood import started to exhibit steady growth. At the same time, its export progressed extensively, i.e., sharply rising from 0.79×10^6 m^3 in 2003 to 4.31×10^6 m^3 in 2004, increasing by 110.0%, which shows that the international competitiveness of China's plywood has improved rapidly and its reliance on international market is decreasing gradually. Import volume of fiberboard dropped severely since 2000 while export volume expanded obviously, which shows that China's fiberboard industry, mainly focusing on medium density fiberboard, had experienced rapid development. According to newest statistic from State Forestry Administration, China's fiberboard production peaked at 15.6×10^6 m^3 in 2004, including medium density fiberboard of 14.67×10^6 m^3. Import volume of particleboard rose annually, which was mainly ascribed to expanding market scope, such as superior furniture production and timbered house. However, particleboard industry develops relatively slowly in China. In 2004, particleboard production was only 6.43×10^6 m^3, just accounting for 11.8% of China's wood-based panel production.

2.5 Paper import (including pulp, recovered paper, and paper and paperboard)

In 2004, China imported pulp about 7.32×10^6 tons in volume and 3.67×10^9 USD in value, increasing by 21.39% and 34.08%, respectively, as compared with 2003. Import volume and value of recovered paper were each 12.3×10^6 tons and 1.63×10^9 USD, rising by 31.13% and 34.04% than the corresponding values in 2003. Paper and Paperboard were imported about 6.14×10^6 tons in volume, dropping by 3.31% than its volume in 2003, 73% of which was focused on coated paper, linerboard, coated paperboard and corrugated paper; the corresponding value amounted to 3.94×10^9 USD, increasing by 2.1% than its value in 2003. As far as import price is concerned, the average import price of pulp climbed from 440.99 USD per ton in 2003 to 487.37 USD per ton in 2004, increasing by 10.52%; average import price of recovered paper grew from 131.2 USD per ton in 2003 to 140.34 USD per ton in 2004, up by 6.97%; and the average import price of paper and paperboard rose from 598.61 USD per ton in 2003 to 641.65 USD per ton in 2004, up by 7.19% (Report on China's forestry development of 2005).

As seen from above-mentioned data, in the case of capital- and technology-intensive products, such as pulp and recovered paper, China relies heavily on the international market and its import volume increases gradually. This is because China's paper industry is mainly based on sweat straw pulp, which greatly restricts its development. Therefore, it is inevitable that China's paper industry should improve the proportion of wood pulp. Due to the severe scarcity of forest resources and lagging pulp-making technology, China has to rely on wood pulp import in short time. As far as labor-intensive products are concerned, such as paper and paperboard, China's comparative advantage is apparent and its international competitiveness has increasingly improved , which directly limits the growth of import volume.

3 Existing problems and countermeasures concerning China's timber import in 2004

3.1 Extent of import reliance of China's timber supply is increasing

In 2004, China's major timber products import in log equivalent volume amounted to 147.18×10^6 m^3, increasing by 12.85% as compared with 2003 (see Table 2). Seen from proportion in log equivalent volume by product type, the proportion of primary timber products rose gradually from 73% in 2003 to 77% in 2004. As far as processed product is concerned, such as plywood, particleboard, veneer and paper and paperboard, its overall proportion dropped from 27% in 2003 to 23% in 2004. As is evident by the above-mentioned changes, China's timber products, especially primary products, rely on international timber resources to a larger extent, which adds to the possibility of these products being influenced by international timber supply; in the meanwhile, China's processed timber products have greater international competitive advantage and rely less on import.

China has become one of the highest timber consumption countries in the world. The implementation of the NFPP promotes rapid import of timber resource, which arouses great concern from some international organizations and countries. "The paradox of China's timber black hole" has suddenly appeared in newspapers and the viewpoint of "increasing timber demand driven China's high-speed economy is devastating worldwide forest" has reached such a pitch. China is a developing country with scarce timber resources and it is a rational choice for China to utilize different channels to acquire timber resources so as to support its timber industry. However, due to the special relation between timber and the ecological environment, it is inevitable that some timber exporting countries start to restrict production and export of log (Song and Cheng,

2004). Therefore, the sustained development of China's timber industry based on imported timber resource cannot be guaranteed. In order to realize sustained and effective timber supply, on one hand, China should try to stabilize destination countries to utilize international timber resources in more ways and through more channels. On the other hand, China should speed up cultivation of fast-growing plantation and improve its timber yield. Through the implementation of the above-mentioned strategy, China can gradually shift the resource base of the timber industry from international timber resources to domestic timber resources which mainly focus on plantation.

Table 2 China's major timber products import in log equivalent volume and proportion in 2003-2004

	Conversion /($\times 10^6$ m^3)		Proportion /%	
	2003	2004	2003	2004
Log	25.46	26.31	19.5	17.9
Sawnwood	9.47	10.53	7.5	7.2
Veneer	0.43	0.29	0.3	0.2
Plywood	1.84	1.84	1.4	1.2
Fiberboard	2.79	2.75	2.1	1.8
Particleboard	1.25	1.31	1.0	0.9
Paper and Paperboard	28.81	27.63	22.1	18.8
Pulp and Recovered paper	60.12	76.52	46.1	52.0

Note: conversion proportion log (1:1), sawnwood (1:1.74), plywood (1:2.3), fiberboard (1:2), particleboard (1:2), pulp and recovered paper (1:3.9), paper and paperboard (1:4.5)

3.2 Timber import lacks macro-control and timber business profit is reducing

In order to promote the implementation of NFPP, the Chinese government abandoned import tariff of log and sawnwood on January 1, 1999 and enforced small border trade policy. With growing demand for a domestic timber market, many small-scale dealers were involved in timber import driven by high profit. These dealers have no information-sharing channels and import timber without fully grasping the market demand, which results in large quantities of timber belonging to the same species; these arrive at the port simultaneously and then are sold at low prices . This kind of business trend not only catapults the sales price of the exporter but also brings down the domestic sales price, which results in decreasing business profit. In order to adjust China's timber import order and regulate import behavior, it is necessary to strengthen the function of trade associations. Associations can effectively collect domestic demand information and unify the import price, which can, thereby, avoid heated competition among numerous importers and also realize active advantage in import (Cheng et al., 2003). In this aspect, China lags behind Russia and Japan. Asian-Pacific Research Association has been established in Russia, which is especially responsible for border trade in the Russian Far East (RFE). In Japan, in order to achieve consolidated trade advantage, there exists a special timber trade association—its major task is to unify import prices. Therefore, referring to experience of these countrjes, a timber trade association should be established as soon as possible, which would be beneficial in the promotion of China's timber import in an orderly, sustained and healthy track.

3.3 Import mode relies heavily on indirect import

Since most of the import dealers work on medium- and small-sized scale, they tend to adopt indirect import modes of signing contracts with foreign exporters. If this kind of import mode is adopted for a long time, it is difficult to change China's negative position in timber import. For example, in 2004, a timber company from Nantong of Jiangsu province imported log of 102 m^3 shipped by container from Guyana. On arriving at the Zhangjiagang Port, the inspectors found that this batch of log had stale woodiness and was of inferior quality plus with a shortage rate of about 66.2%. It was estimated that the total economic loss of this timber import trade amounted to 20 thousand USD. This case shows that the fundamental cause of this trade fraud is ascribed to an indirect import mode. Additionally, with increasing awareness of ecology and environment, many countries start promulgating some measures aimed at restricting log export. For example, the Indonesian government has forbidden log export after coming into power; the Russian government also adopts some measures to restrict export of broadleaf log. Facing this situation, if indirect import mode is adopted for long, China's timber import will face a great risk of being interrupted.

To intensify the safety of China's timber import and lessen unnecessary trade disputes, it is better to develop transnational forest exploitation (Cheng and Song, 2005). Many countries with intensive forest resources and scarce labor, such as Russia, Gabon, etc., actively promulgate preferential policies to encourage transnational forest exploitation cooperation. For instance, regulated by the Gabonese government, any forest exploiter located in Gabon with more than one timber processing mill can freely export log to any place in the world except Europe and the Mediterranean sea area. Therefore, through foreign forest exploitation, China can fully combine its labor advantage with its forest resource advantage of cooperative countries and get active advantage on resource acquiring and risk avoidance. Thus, on the one hand, China can stabilize its timber supply. On the other hand, once these countries forbid log export, China can also process locally and then re-export to the domestic market, which can simply avoid

the risk of interrupted timber supply.

4 Conclusion

Timber import has accounted for nearly 50% of China's timber supply and has become one of the indispensable driving powers of China's timber industry. However, during rapid development, there exist some noticeable problems in China's timber import, such as import reliance, timber supply risk and industry safety, etc. Finding out these problems in time and adopting positive and effective countermeasures are beneficial to China in order to promote sustained and healthy development of timber import, to alleviate the pressure of natural forest protection and to save time for plantation cultivation.

References

Song W.-M., Strategic thoughts on China's timber trade, Fo. Econ., 2000, 5: 47–49 [宋维明, 对我国木材国际贸易战略的几点思考, 林业经济, 2000, 5: 47–49]

Song W.-M. and Cheng B.-D., Thoughts on resource base of China's timber trad,. Green China, 2004, 10: 60–63 [宋维明, 程宝栋, 关于中国木材贸易资源基础的思考, 绿色中国 2004, 10: 60–63]

Cheng B.-D., Song W.-M. and Tian M.-H., Analysis on import and export of China's major timber products in 2002, J. Beijing For. Univ. (Soc. Sc. Ed.), 2003, 2(4): 38–40 [程宝栋，宋维明，田明华，2002 年我国主要木材产品的进出口分析，北京林业大学学报 (社会科学版)，2003, 2(4): 38–40]

Cheng B.-D. and Song W.-M., Import analysis of China's major timber products in 2003, For. Econ. Probl., 2005, 25(1): 53–56 [程宝栋, 宋维明, 2003 年我国主要木材产品进口分析, 林业经济问题, 2005, 25(1): 53–56]