

Comparison of Russian and Chinese forest economies in transition

These economic considerations in Russia and China illustrate the potential growth of regional markets and the consequences this may have on international trade in tropical timber.

Introduction

China and Russia, the two largest “transitional economies”, illustrate two different approaches to transition: Russia used the “shock therapy” method, while China adopted gradual transition rather than radical changes. The contrasting outcomes of the reforms are obvious: from 1992 to 1997, GDP in the Russian Federation fell by 40%, industrial production halved its capacity, and agricultural production fell by 35%. Meanwhile, China has achieved nearly 10% average growth over the past two decades. Despite many studies, China’s economic phenomenon is still a puzzle for economists since it cannot be explained by mainstream economics.

Forest economies during transition

Table I presents some basic facts about Russia and China. Russian forests account for almost one fifth of world forest resources (22%), and the country is the world’s richest in boreal forests. Comparatively, China is deficient in forest resources and its forests are unevenly distributed: natural forests, mostly secondary growth, are located in the northeast and southwest areas. Only 1.8 % of the natural forests are intact virgin forests. Forest plantations are mostly located in south and southeast China and play an important role.

The transitional changes in forest economies are significant for both countries (Table II). In Russia, timber removal in 1988 reached 325 million m³, while in 1997 total cuts accounted for 88 million m³, far less than the post war rates (146 million m³ in 1946). Annual allowable cut has not been met for many years in any of the members of the Russian Federation. Forest industries have been experiencing a severe crisis since 1990. Timber removals, industrial roundwood and sawnwood production decreased almost 4 fold during the period 1989-1996. The slump in the pulp and paper industry as well as in the production of panels is almost 3 fold. Current economic reforms in Russia have caused destruction comparable with the devastation after World War One followed by the October Revolution in 1917 and civil war (1918-1924) then World War Two (Table III).

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Economic reforms in the Chinese forest sector are regarded as successful in general, because growth of all the forest products has not been achieved at the expense of forest resources devastation. From the late 1980s to the early 1990s, forest area and inventory have increased from 115 million ha and 8 billion m³ to 134 million ha and 10 billion m³. China lacks forest resources, but is the world leader in forest plantation. Recent national inventory data show that forest plantation areas account for about 41 million ha and an additional 2.5 billion trees are grown outside forests adjacent to houses, villages, roads, water reservoirs. These trees outside forests are important for farmland, particularly in north China. HUANG *et al.* (1997) estimated that agroforestry systems cover 45.25 million ha in China. ZHANG (2000a) showed that China has already embarked on the same process of forest transition that occurred in many current developed counties a few decades ago.

More importantly than the increase in timber and wood-based products, forest ecotourism is becoming an important industry in China, accompanying economic development and increasing living standards. Nearly 2 000 forest locations have potential commercial value for ecotourism. Between 1982-1995, a 701 forest parks, 19 international hunting grounds and one forest recreation area were established, covering a total of 6 million ha. In addition, ecotourism promotes infrastructure development and creates employment opportunities for local people. Forests also produce non-wood forest products (NWFPs), of capital importance for the rural economy, including fruits, edible oil, bamboo shoot, mushrooms and many other foods, beverages and traditional Chinese medicinal herbs and spices.

Several problems in China are similar to those in Russia, e.g. unemployment, especially in the state-owned forest regions. However, the problems in China are mainly consequences of a lack of forest resources and poor flexibility when switching to other economic sectors due to inadequate decision making and misguided forest economic policy in the past. Russian problems probably result from low efficiency, lack of demand and increasing cost of transportation and harvesting.

Table I
Some basic facts about Russia and China

Basic characteristics	Russia	China	Jointly as % of world total
Area (million ha)	1 700	960	21
Population (million inhabitants) 1996	148	1 211	24
GDP (billion US\$) 1996	345	698	4
GDP annual growth (%) 1990-1995	-10	13	2 (world average)
Forest area (million ha)	763	133	26
Forest inventory	85	10	25
Share of state ownership forestry land (%)	95	70	80 (world average)

Sources: FAO (1997, 1998); World Bank (1997a); NILSSON, SHVIDENKO (1997).

Understanding forest economies during transition

The contrasting performances of the forest sector in Russia and China are obvious, but the underlying forces are not self-evident. These can be identified and categorized by changes in relative prices, technology and institutions.

The dramatic fall in Russia's forest economy is not a surprise if the forest sector is considered in the context of the national economy. On the one hand, decreasing domestic demand and consumption have put pressure on timber price; on the other, rising energy and raw materials prices (which currently constitute more than 50% of production costs) together with high transportation costs greatly increase the costs. The current transition towards a market economy is opening up the economic borders of the Russian Federation. As a result, prices for natural resources exported from Russia (including timber) have been increasing, and reached world prices at the end of 1995. Both timber transportation and transaction costs are relatively higher than that for other industrial products. Even if the price of timber is rising, especially for the consumers and exporters, the producers may not necessarily benefit from the rising costs. The situation is even worsening when aggravated by the financial problems that increase the cost of capital. All these factors jointly decrease the relative price of forest products and shift capital investments to other sectors. Adjustments are smoother in a market economy where labor and capital shifts are more flexible, but this is not the case in Russia.

In contrast, the Chinese economic boom and market freedom have significantly increased timber prices, attracting more investments in the forest sector. Figure 1 shows that the relative timber price in China has increased significantly during transition. Since the domestic timber supply is insufficient, China has also imported huge amounts of forest products over the past two decades. ZHANG *et al.* (2000a) empirically test the impact of relative price on the development of the forest sector in Hainan, China.

Table II
Changes of major forest products from 1980 to 1996

Products	Russia		China	
	1980	1996	1980	1996
Roundwood (million m ³)	328	97	54	67
Sawnwood (million m ³)	80	22	14	24
Plywood (million m ³)	1.5	0.9	0.3	5
Fiber board (million m ³)	1.2	0.6	0.5	2
Particle board (million m ³)	3.5	1.5	0.1	3
Paper and paperboard (million tones)	7.0	3.3	5	30

Sources: The State Statistical Committee of Russia (1997); The Ministry of Forestry of China (1987, 1997).

Table III
Comparison of the post-war and current economic recession in Russia

Products	Times (1940-1945)	Times (1989-1996)
Roundwood	1.5	3.6
Industrial roundwood	1.9	3.7
Sawnwood	2.4	3.8
Pulp	1.9	2.7
Paper	2.5	2.6

Sources: NIPIEIsprom (1991); The State Statistical Committee of Russia (1997).

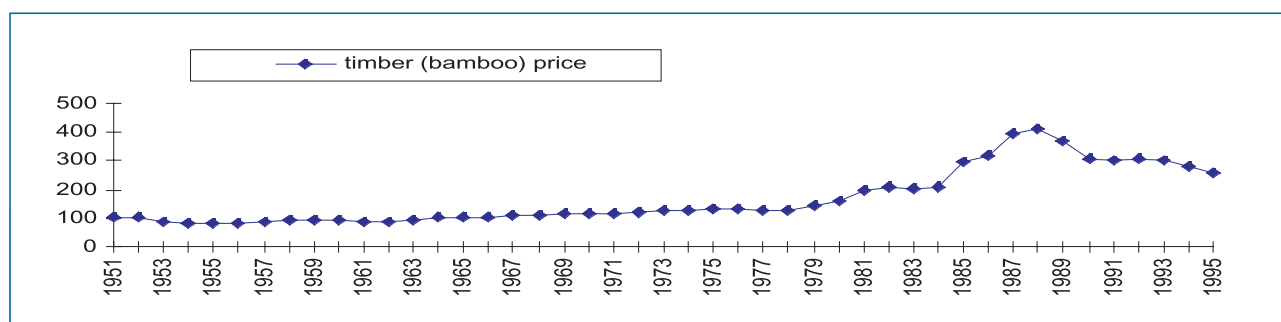


Figure 1. Deflated (by whole retail price index) timber price change in China. Source: China's National Statistical Bureau (1996).

Current economic reforms in countries in transition correspond to some extent to changes in institutions and organisations. Whereas institutional change in market economies is generally regarded as a modification, reforms in the former socialist countries are perceived as institutional revolutions. The institutions of the Western world, both economic and political, have been relatively flexible (NORTH, 1997). Therefore, economic reforms in the former socialist countries have more far-reaching effects on the economy and society. For several reasons, institutions play a special role in forestry (ZHANG, 2001). It is clear that institutional changes have a great impact on the forest sector. However, their impact is not self-evident.

Forest reforms in Russia were a combination of achievements, mistakes and miscalculations. The fatal mistake since the beginning of the reform was the implantation and forced promotion of the forest long-term leasing system. The most advanced developed countries practice a flexible and adaptive contracting system based on relatively short-term contracts. The Canadian leasing system is different from that in Russia because it is practiced under different conditions on wider forest plots and incorporates short-term service contracts. The extremely low stumpage price in Russia (about 0.5 US\$/m³) is one of the main consequences of the leasing system in Russia. (PETROV, LOBOVIKOV, 2000).

Unlike Russia, China has adapted a gradual evolutionary method of economic transformation. At the beginning, Chinese government implemented reform to improve productivity and living standards without the intention of passing to a full market system (PERKINS, 1994). In fact, China's economic situation in the late 1970s was "too good" and the public was reluctant to change the system (FAN, 1994). Reform in the forest sector was also moderate. In China's collectively-owned forests, the responsibility contracting system was introduced into forestry some years after being tested in agriculture. An important feature of economic reform in the forest sector is that the share-holding system prevails after two decades of reforms (e.g., SONG *et al.*, 1997). The economic reform in China's state-owned forests adopted an even slower process: from revenue remittance, taxation and price liberalization to contracting system. Details concerning institutional changes in Chinese forest sectors during transition can be found in the literature (e.g., ZHANG *et al.*, 1999; ZHANG, 2000b).

Concluding remarks

Russian and Chinese forest economic transitions cannot be compared directly because they differ in starting points and final goals. At the beginning of the reform in 1976, China was and continues to be an agrarian country with 70% the population on the land, a level not seen in Russia since 1910. In the late 1940's, Russia became an industrial country with 14% of the population on the land. In the late 1970's, Russia began to confront the realities of post-industrial society in which most of the population is shifted from industrial and agricultural sectors to services spheres. Unlike most of the developed western countries, which earlier converted easily to the new society, Russia ran into huge social problems. Administrative planning and autocratic political systems became an obstacle to postindustrial society and were eliminated almost overnight. Disruption of social and economic infrastructures has caused severe economic, political and social crises and suffering for millions of people. Russian society was disoriented, disintegrated and had lost its former values. The former weak leadership did not act in a timely manner to deal with the phenomenon and did not correctly guide citizens toward new values: establishment of new post-industrial society with globally recognized economic, democratic and ecological values. Meanwhile, the unusually destructive economic crisis has had a positive effect. It has cleared plenty of room for the new society and deemed the country to the accelerated economic growth at the verge of the post-industrial era. A question still remains whether the country's leadership will be able to take advantage of these uniquely favorable opportunities.

China is also facing challenges, obstacles and opportunities due to the new post-industrial era opening in the most developed regions of the country. Considering Western, Russian and the world experiences, the successful gradual introduction of a free market and democratic values, as well as strong and pragmatic leadership, the country is far better prepared now to cope with the current and future challenges.

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