New Zealand wood markets
A 60-year overview and where we might be heading

Dennis Neilson

It is tempting to write only about a literal definition of economics of markets, that is, about the economics of wood products and where they fit to be competitive. However, success or otherwise in this industry depends on more factors than just plain numbers. This article discusses some issues wider than simple numbers.

Government involvement

The development of wood markets for the New Zealand forest industry sector has experienced a number of significant changes in the last 60 years. While the radiata pine plantation industry has been active for well over 100 years, it has really only been since World War II that radiata pine processed wood markets have developed domestically and internationally. In addition, for 30 years the government was a main player, a central premise to this article.

World War II changed the scene in the New Zealand forest industry sector. By the end of the conflict the two largest forests in this country around Tokoroa and Kaingaroa Forest were both rapidly reaching maturity and needed new markets quickly. Although one owned by NZ Forest Products was privately-held, and the other was a state-owned forest, the state played a major role in helping with the development of processed markets from 1940 until into the 1980s.

Its biggest role was planning and executing a major project to attract capital to build sawmill, pulp and paper mills at Kawerau. This became Tasman Pulp & Paper Limited which commenced operations around 1955 and became for a time New Zealand's largest company and exporter.

Secondary economics

In those days the economics of growing trees was secondary. The major wood supply contracts awarded to Tasman were for 75 years, and with the first 25 years there were no escalation provisions. The price set was around one penny a cubic foot, which became one dollar per cubic metre, and there was no differentiation between saw log and pulp log prices. A clause in the major supply contract actually referred to the government supplying wood to Tasman at the lowest price it could. In addition to this secure and cheap wood supply, the New Zealand government built the towns of Kawerau and Murupara, a rail line from Murupara to Kawerau and on to Mount Maunganui, and the Port of Tauranga.

A major motivation of the Kawerau project was to produce newsprint in New Zealand as an import substitution product. Government work with overseas companies and research institutions proved that radiata pine could make commercial kraft pulp and newsprint. Initially the Tasman consortium did not want to build a sawmill, but was required to do so. The government helped with technical expertise, having opened the experimental radiata pine sawmill at Waipa in 1940. Many of the early senior executives and operators at the Tasman sawmill came from Waipa.

Government help

The government continued to 'assist' Tasman well into the 1960s, with its involvement in establishing Tarawera Forest to expand wood supply to Tasman, including passing an enabling Act of Parliament. Then it helped with the negotiations to establish Closer Economic Relations, the first free trade agreement, which helped with Tasman's access into the Australian newsprint market. The major role of the government in helping to establish the NZ Forest Products Kinleith wood processing complex was to introduce tariffs, to ensure the company was protected against foreign imports of the paper it was to produce.

The government's major role in assisting the expansion of the industry continued into the 1970s with the allocation of a long-term wood supply to Carter Holt and Sons to establish a sawmill and pulp mill at Napier in 1972. Even more controversial was a Muldoon 'election bribe' decision to help in the building of a mechanical pulp mill at Karori. This turned out to be a very mixed blessing for various early owners. I was a little involved in selling off the pulp mill for the princely sum of 50 cents in 1990, although it is now owned by a Malaysian company and appears to be operating satisfactorily.

At various stages the government offered quite attractive planting subsidy and tax incentive schemes to encourage the establishment of more plantations around the country. The government initiated and developed log export markets from the late 1960s.

Finally, the government helped with port reform in the late 1980s. With government support, the log export industry with some port service providers led the charge in a major port reform in Tauranga. This reform was very beneficial to the wood export industry and brought New Zealand several thousand kilometres closer to Asian markets. I saw an example of its effect because at the time I was responsible for loading woodchip vessels from Tauranga. Pre-reform it took up to 19 waterside workers to load a vessel, but post-reform it took less than four or five.

Government appetite wanes

By the early 1980s, the government's appetite to support the industry, by continuing new land planting schemes in most regions of New Zealand and to support the establishment of industry itself, was waning fast. From 1980 and for another 16 years it entered into an ever more serious, and at times bitter dispute with Tasman over log supply contract and price problems.

The role of the government in helping in the industry and its market development was well and truly squashed from 1984, when the then Labour government went about starting to sell Crown assets and to exit its own portion of the industry. This was a process which, in various guises, continued from 1987 until 1996 when the Kaingaroa forest and Waipa mill were sold.

This linkage between the government and industry development in New Zealand has now all but been totally extinguished. I wonder what might have happened if government direct or financial involvement had continued, as it did more recently in those countries which have witnessed the largest growth in the forest products industries over the last 20 years. This includes Chile, Uruguay, Brazil, China and even Australia to a lesser degree.

In the administrative and policy arena, the government has reduced its role a number of times. When I started work there was a separate Ministry of Forestry and its Ministers were senior members of Cabinet and held sway. Then the Ministry of Forestry was merged with Agriculture and Fisheries and more recently became part of a super Ministry, the Ministry for Primary Industries. The Minister representing forestry in government is actually an Associate Minister and is outside cabinet. Try as she might, her influence is by definition, rather limited.

Role of integrated companies

From 1955 until 2006 the New Zealand industry and market development were generally influenced at various stages by four 'fully' integrated forest products companies – Tasman Pulp & Paper, NZ Forest Products/CHH, Carter Holt/CHH/Pan Pac, and Winston/Ernslaw One. These companies owned trees, a sawmill or plywood mills, a pulp mill and in two cases also paper mills.

The scale, especially of the two major mills, enabled funds to be spent on market development both within New Zealand, then to Australia, and then further afield to Asia and North America. Some smaller and privately-owned mills were also very innovative, especially in developing the Australian structural and the United States appearance grade markets.

However, scale helped in market development, including funding industry association efforts into organising the translation of technical information and in holding several seminars in Asian countries to pass technical information on to potential radiata pine users. The demise of the major integrated companies in the last 15 years has been a main factor in the serious weakening of various associations in domestic lobbying and in market development overseas.

A possible argument

You could argue the pros and cons of the integrated forest products model for the successful development of markets and cost-efficient production in New Zealand. However, few would be arguing with the almost total lack of serious capital expenditure and market development occurring in New Zealand, with a small number of exceptions such as Pan Pac's new BCTMP mill. This contrasts with the Chilean model of Arauco and CMPC, both continuing to be family-controlled listed companies which are now global giants.

There are also giant pulp companies such as Fibria, Klabin and Suzano in Brazil, or integrated Stora Enso and UPM of Finland, which have developed large timber markets in Japan and are looking at China as the next conquest, and pulp and paper markets in Brazil and China. Stora Enso is now a major threat to New Zealand sawn timber exporters to Australia by shipping pine sawn timber from Poland and Estonia to Melbourne and Sydney.

Role of private equity in the sector

Many think that the sale of government owned, and of Forest Products owned plantations in New Zealand, only mirrored what occurred in the United States, as most integrated companies sold off their forests to institutional investors mainly by way of Timber Investment Management Organisations. Unfortunately there are stark contrasts. It is true that Timber Investment Management Organisations buying forests in the United States are generally 'tree only' companies as they are in New Zealand.

However, in the larger capital pool of the United States and Canada, a number of ex-forest products company sawmills and plywood mills have been sold to very large private equity funds. Examples include Boise Cascade and Georgia Pacific, which is owned by the billionaire Koch brothers, with their Koch Industries being identified by Forbes as the second largest privately-held company in the United States.

Only this July, for example, Georgia Pacific completed its US$710 million purchase of the Temple-Inland Building Products assets from International Paper including fibreboard, gypsum products, sawn timber and particleboard. In addition, a number of very large Canadian sawn timber companies are investing heavily in existing and new sawmills in Canada and the United States. In 2013, the giant German sawmilling company Klausner is building two new sawmills in the south of the United States, each using two million cubic metres of logs a year.

Therefore, even with the weak North American sawn timber markets there is a range of well-capitalised listed and private solid wood processing companies able to rationalise and expand efficient mills and to increase production. In contrast, there are no listed companies with solid wood processing facilities in New Zealand. It seems that there are only a very few sawmilling companies that seem committed, or able, to measurably increase production capacity and market exposure to the developing markets of China, South East Asia and India.

Neutral result

While institutional ownership of much of New Zealand's forest sector has had some upsides, for the industry overall it has probably been neutral to negative. A positive has been a renewed financial stability after the disastrous situation with Fletcher, and to a lesser extent Carter Holt Harvey in the 1990s and early part of the last decade. This has enabled rotation ages and log quality to be substantially improved.

By definition much of this money is temporary, with funds usually having a limited life span of 12 to 15 years. Already we have seen a number of investors exiting New Zealand forests. Most notable is Harvard Management Company, having sold down about 70 per cent of its interest in Kaingaroa forest after a very profitable decade of ownership. The private buyer of the CHH forests held on for only a year or two before moving on, and has since closed down a number of sawmills and a plywood mill without investing in serious modernisation or expansion.

Therefore in 2013 we have ended up with a badly lopsided forest industry investment sector. Both the government and most long-term integrated owners have exited, to be replaced with a number of very much shorter-term focused forest and possibly processing owners. Some private owners remain committed to the industry in the medium to long-term, but many are hamstrung by their small scale and limited access to funding.

Role of scale in an efficient industry

The entire range of forest products – trees, sawn timber, panel products, pulp and paper – are commodities. This has meant that real product prices and returns have tended to reduce. I have a 19-year-old radiata pine plantation forest. When it was planted, the expected internal rate of return was 10 per cent. If planted today, the expected return would be only half that. Similar trends have been experienced in sawn timber, plywood, reconstituted wood panels, pulp and paper. Companies overseas have tried to counter this by doing three things – increasing the scale of their processing plants, expanding operations where direct and indirect government subsidies are offered and building or buying close to markets or close to the cheapest wood fibre and labour costs.

Increase the scale of processing plants

When the pulp and paper mills and sawmills of Tasman and NZ Forest Products were built, they were close to being world scale, but this is not the case any more. Most mills in New Zealand now fall way behind this benchmark.

When Fritz Klausner built four sawmills in Germany 10 to 15 years ago, each with a capacity of two million logs a year, much of the older, smaller and inefficient German sawmill capacity was frozen out of the markets and had to close down. This was a tough but transparent market reality check. Successful selling of commodities means being in the lowest quartile of costs.

The successful Canadian sawmilling companies are regularly building new or upgraded sawmills using 1.5 to 2.0 million cubic metres of logs a year. The biggest sawmill in New Zealand uses only a fraction of that.

The latest Chilean radiata pine plywood mill, opened in 2013, has a capacity of 350,000 tonnes a year. It is little wonder that most or all pine plywood sold by Mitre 10 Mega in Rotorua comes all the way from Chile, while a small plywood mill located less than 100 kilometres away from Rotorua with a capacity less than 100,000 tonnes a year operates on restricted hours because of a lack of markets.

New pulpmills being built, even softwood mills, are two to three times the size of those existing in New Zealand and hardwood pulpmills may be five to eight times that size. The most recent announcement of a new pulpmill is that of APP in Indonesia, which will produce two million tonnes a year of pulp.

Paper machine sizes have also increased. The largest of the three newsprint machines built at Kawerau had a capacity of 150,000 tonnes a year. In contrast, in June, I drove past a Finnish company-owned new two-line paper mill near Shanghai which had two 400,000 tonnes a year paper machines on a single site, right on a port, where pulp was being imported from Brazil to convert to paper. Turkish Yildiz Entegre has been building numerous MDF mills in Turkey and elsewhere. Its capacity is now several times the size of a standard New Zealand MDF mill and it has to import most of its wood fibre from around the world.

It is no coincidence that there is a close linkage between three world scale size forest owners in New Zealand – KT, HTRG and Matariki – and world scale log export operations from this country. Tauranga-based TPT is the largest log exporter in the world and ships logs from New Zealand, Australia and the United States.

Size is not everything, and some processing mills can successfully stay small and operate well in niche markets. Claymark is one such example, probably Tenon, and perhaps Craigpine in the South Island. But for many wood products sold as commodities, size and

the reducing unit costs brought about by increased scale can make the difference. This includes some mills owned by overseas companies which feed into parents which actually use their products, such as Juken NZ and Pan Pac.

Expanding operations with offered subsidies

Expansion of operations with subsidies may have occurred in Chile where planting subsidies were in place for decades, or in Uruguay where carefully targeted subsidies were also in place for years. This enabled a large increase in planting and major processing expansions, including a new 1.3 million tonnes a year pulp mill being commissioned in 2013. This could also be the case in the south of the United States, which is close to very cheap logs and where federal, state or local governments heavily subsidise new industries.

In China there has also been assistance available, and in Russia with subsidised cheap wood supplies. This is where International Paper went after leaving CHH in New Zealand and has recently built a large new sawmill and pulp mill with its partner Ilim. Why has it done this? Because it can land softwood pulp into Shanghai at a saving of 30 to 40 per cent over its higher cost Pacific Rim competition, as well as landing timber much more cheaply.

Building-buying close to markets or labour costs

Building or buying close to markets or close to the cheapest wood fibre and labour costs includes two large Turkish companies expanding in Turkey with higher cost fibre, to be very close to that vibrant domestic 70 million market and next door to the Middle East. In addition, there are new plants in Bulgaria, Romania and Russia, where Kastamonu is building the world's largest wood panel complex to be close to cheap wood fibre, or various companies building pulp mills next to cheap-fibre Brazil, Chile and Uruguay.

Summary

New Zealand is blessed with some of the most productive softwood tree growing land in the world. It can still make better use of this, but it has translated into cheap growing costs. RISI, a US information provider for global forest products, provided estimates of growing costs in 2012 in New Zealand at US$33 a cubic metre, New South Wales at $102 a cubic metre, in the Pacific northwest in the United States at $302 a cubic metre, and $3,850 a cubic metre to grow pine in Finland. This in turn has spawned a large log export industry here. However, if we are to witness a renaissance of the solid wood processing and the pulp and paper industry, our processing cost structure and some government policy settings must change.

Many factors such as distance to markets, relative quality of woodfibre, an often unmotivated workforce, restrictive work practices, a mountain of paid holidays compared with some competitors, are outside industry control. Chinese mills operate seven days a week, 12 hours a day, with conversion costs 30 per cent of those in New Zealand and with 70 per cent or more green sawn conversion factors, close to the markets, and with residues worth more than twice what they are in this country. If we could match that, we might start to roll.

Is a paradigm shift likely to occur soon? Major changes to exchange rates will help. Some limited processing expansion is probable with two or three players, but each year which goes by with no new pulp and paper expansion we get closer to a really serious problem. New bioenergy or biofuel markets may open up, but so far they tend only to operate overseas when wood fibre is virtually free. It will take a gigantic leap to return the New Zealand industry to the place in the sun it held 25 to 30 years ago.

***Dennis Neilson is Director of DANA Limited based in Rotorua. In 2013, DANA is publishing the seventh edition of* The New Zealand Forestry Industry Sector Review.**