

# Paper Industry Commentary

## From Fisher International

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## Will Imported Kraftliner Regain Its Share of the Chinese Linerboard Market?

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Over the past fifteen years, China's imports of kraftliner have experienced a V-shaped path, falling almost by half from their 2002 level and then rising again in the last two or three years. Figure 1 shows annual kraftliner imports from 2002 to 2018. The question is, will imports keep rising or, being just cyclical, will they fall back to their lower levels? This is an important question, for China's market is now so big that rising imports could be a significant boon to producing countries, while falling imports could depress the markets of those producers. The answer lies in an understanding of the evolution of China's linerboard market.

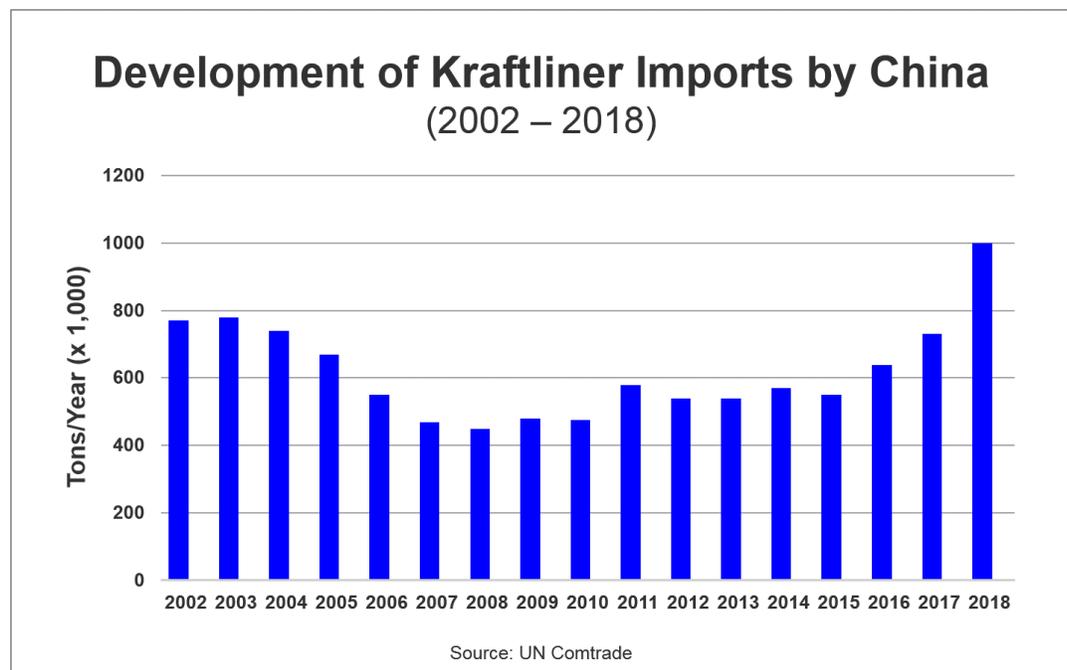


Figure 1

### Some History

Twenty years ago, China's export-oriented manufacturing industries were quickly growing. From electronics to textiles to household goods and beyond, China was expanding rapidly and delivering many of those goods to the rest of the world in corrugated boxes.

The growth was rapid enough that China's domestic corrugated industry lagged for a while in producing the quantity and quality of boxes that its customers needed. As a result, China had to import the required amounts of kraftliner needed to supplement domestic production.

Figure 2 shows a parallel growth development in general over the period 2002-2018 between containerboard demand and industrial production as one of the major drivers for the former.

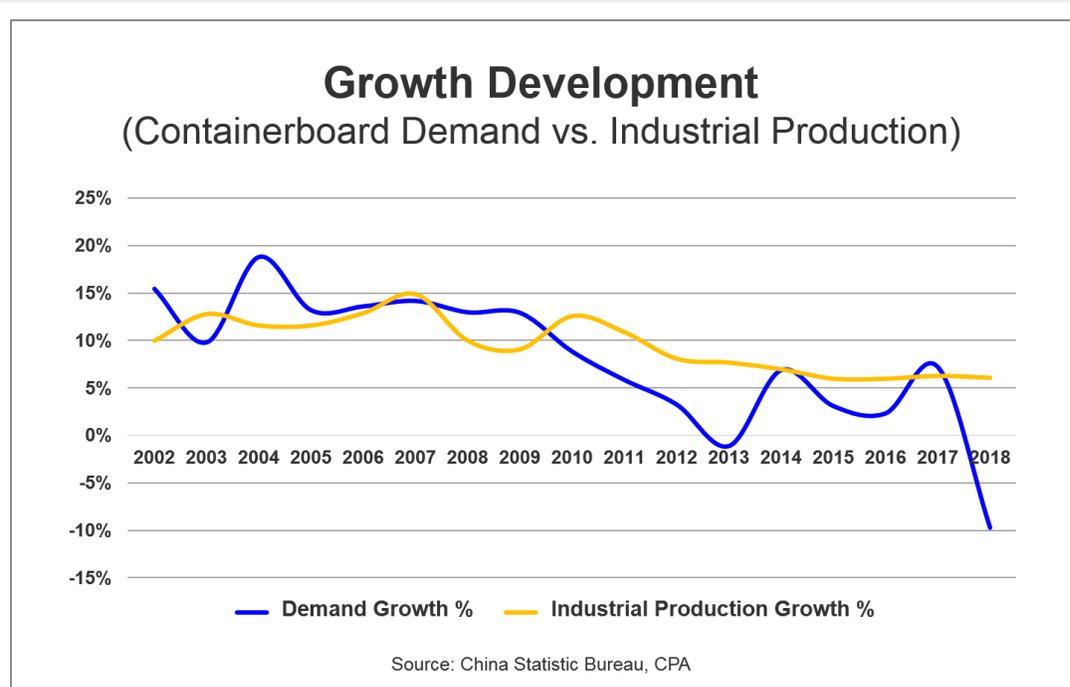
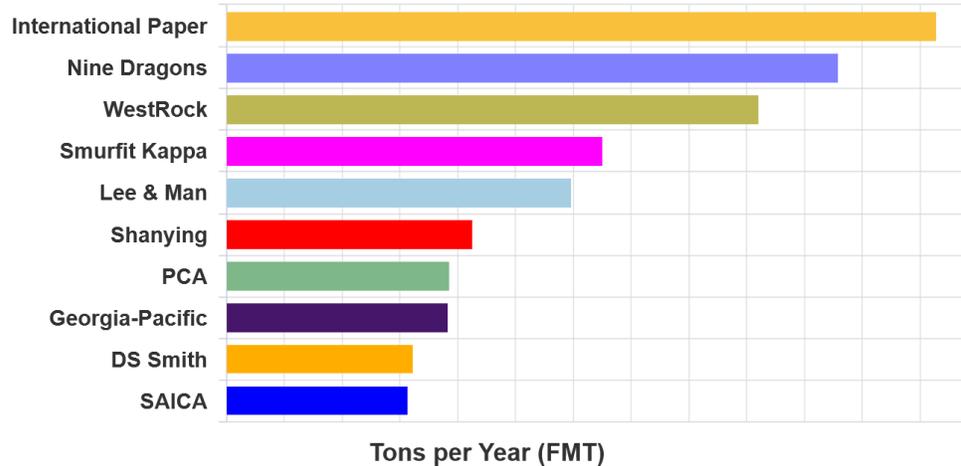


Figure 2

During the earlier years of this period, large containerboard producers emerged. Nine Dragons and Lee & Man, the top two containerboard producers in China today, had a combined capacity approaching 2 million tonnes in 2002, just 4 years after each installed their first paper machine in 1998. This marked the beginning of a great development period for China's containerboard industry.

Today, among the top 10 containerboard producers in the world, there are three Chinese companies: Nine Dragons, Lee & Man, and Shanying, with two of them in the top 5 as shown in Figure 3.

### Top 10 Containerboard Producers in the World



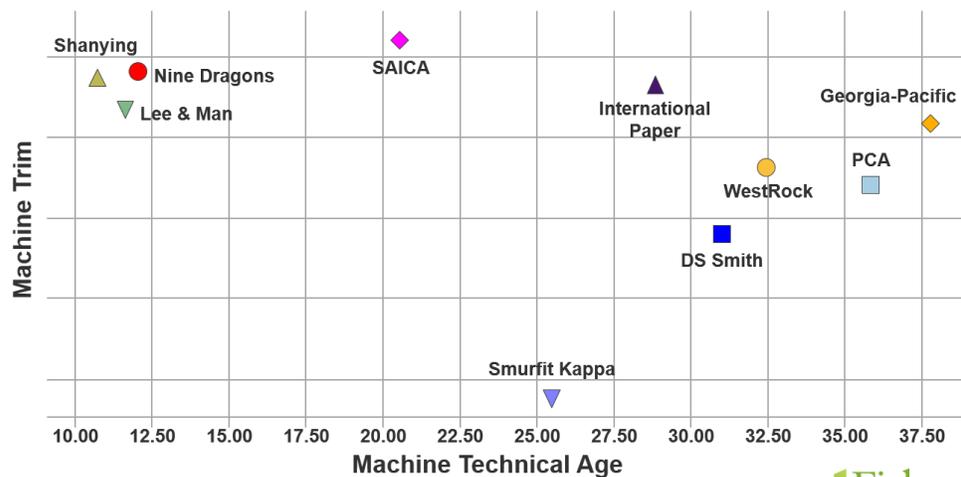
Source: FisherSolve Next™  
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Figure 3

Having made substantial investments, the leading Chinese containerboard producers own some of the industry’s newest and most sophisticated process equipment as shown in Figure 4.

### Top 10 Containerboard Producers (Machine Technical Age vs. Trim)



Source: FisherSolve Next™  
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Figure 4

Together with improved process technology, these have helped expand their owners' product portfolios to make premium grades of kraft-top liner with higher physical strength and better smoothness (hence good printability) and lower basis weights of testliner for a wide range of end-uses.

As the investments made by domestic Chinese linerboard producers caught up with demand, the market shifted from imported kraftliner to locally-made kraft-top liner. And, as capacity and quality further improved, many customers shifted from kraft-top liner to the higher-quality testliner now being produced domestically.

With the availability of locally-made kraft-top liner of good quality, a large amount of non-essential demand for kraftliner was replaced, leaving only essential demand based on a need for kraftliner's unique characteristics. Imported kraftliner volume then grew in keeping with the overall growth of linerboard consumption (Figure 5).

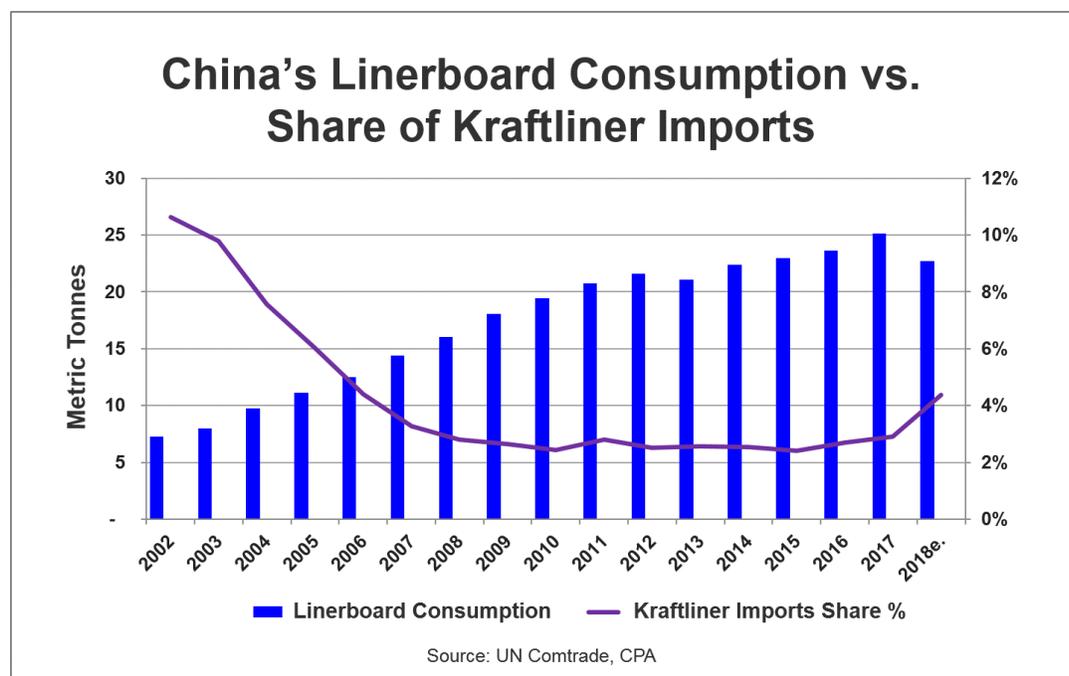


Figure 5

As a result, China's linerboard production became even more heavily dependent on imported recycled fiber, as shown in Figure 6. By 2017, with production of linerboard having almost quadrupled, the volume of imported old corrugated containers (OCC) had increased by about six times while that of imported unbleached kraft pulp (UKP), which is used largely for linerboard production, had a slight drop over the same period.

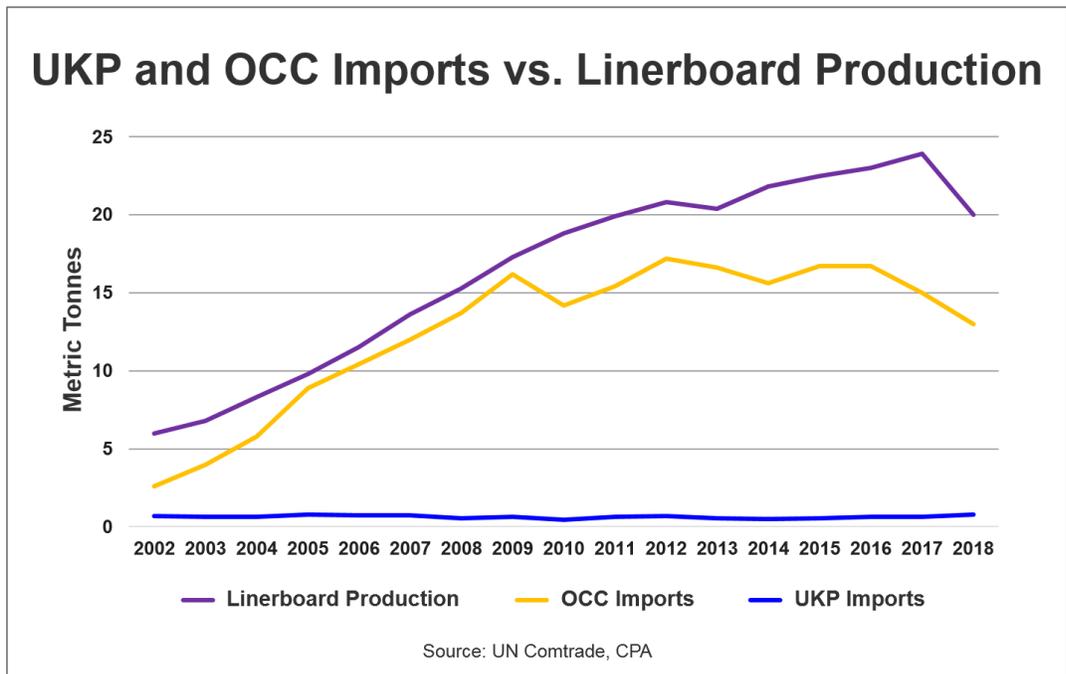


Figure 6

Today China’s containerboard furnish is around 98% recycled, and about 30% of it is imported. This is made possible by the introduction of improved process technology on modern paper production lines and stock preparation systems, and also by the availability of high-quality imported OCC, especially American OCC (“AOCC”) which has a high content of virgin pulp. Nowadays, AOCC is used as a key fiber component in production of kraft-top liner of high and premium grades in addition to the use of UKP.

### Recycled Fiber Regulations

In the second half of 2017, China issued several regulations and related policies regarding imported recycled paper (RCP). First, there was a ban on unsorted RCP, then an increase in the threshold limit of impurities allowed in RCP. Later China introduced an RCP import permits system.

Their outcomes and implications, coupled with the pending issue of a trade war between China and the U.S., can be far-reaching for the decade to come. Figure 1 shows the short-term impact on imported kraftliner (it soared in 2018) and Figure 6 shows the impact on linerboard production and OCC imports (they dived in 2018).

There are other significant impacts on the fiber and product structures of China’s linerboard industry, considering locally-sourced OCC that is not in a position to replace imported OCC, especially AOCC, in quality or volume.

So now back to the question of whether these events will become the cause of higher or lower kraftliner exports to China.

Figure 6 shows an interesting development of linerboard consumption versus the share of imported kraftliner, which stayed relatively stable during the period 2008-2017 after a rapid drop over the previous years until it rose in 2018. Now we will see whether the 2018 share increase was a temporary response to the sudden imposition of OCC regulations or a more permanent state.

A bigger portion of the essential demand for imported kraftliner as mentioned earlier is for export packaging, largely specified by traditional users. The selection of imported kraftliner either for export packaging or domestic packaging is mainly to satisfy the physical strength requirements of end-uses like high-end of electrical and electronics, textile and shoes, and heavy-duty packaging for transportation of equipment/parts and chemicals, and moisture proof requirement as by some food, beverage and fresh products. These end-users have strict criteria on quality attributes of containerboard and are less price sensitive.

For imported kraftliner to gain share of “non-essential” demand, which is more price sensitive, it will have to compete with domestic supply that has dominated the segment for most of recent history. Figure 7 shows that, while virgin pulp-based or partly virgin pulp-based, linerboard made by Western producers should be cost competitive against Chinese linerboard producers.

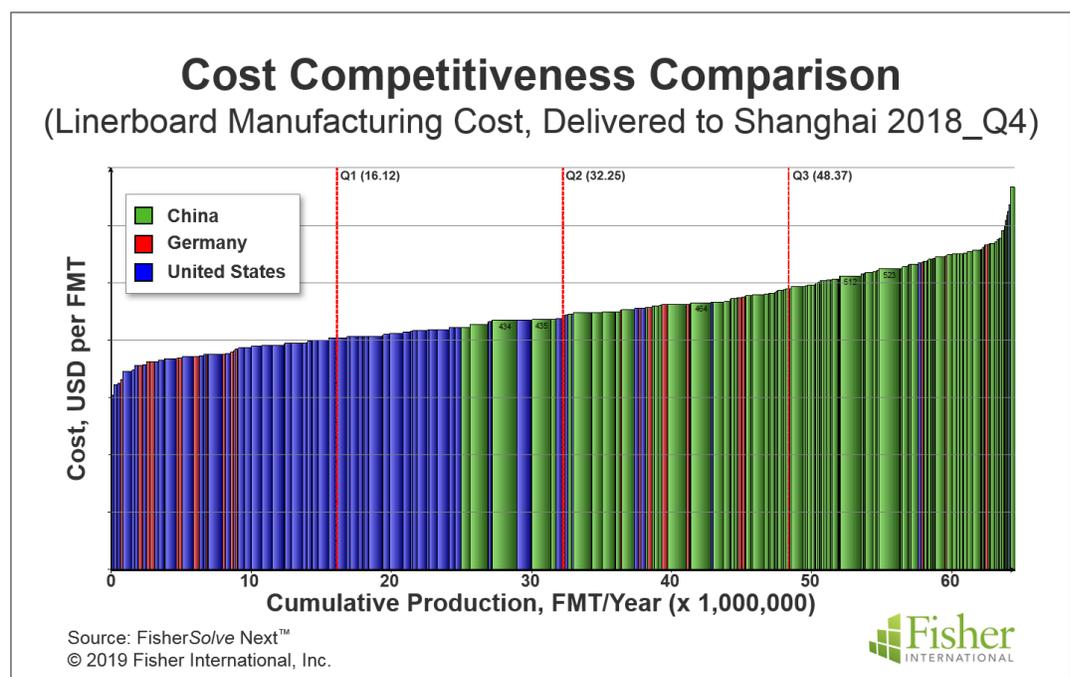


Figure 7

As in any new market, knowing the customers and incumbent competitors is critical information. Domestic containerboard producers can boast of being well-established with local customers, given their footprints and logistics, short delivery times, wide product ranges, and business flexibility.

New entrants have a lot to learn, e.g., who are the merchants, corrugators, and end-users, and what role does each play in containerboard procurement? How is containerboard distributed in China? And, for each segment, what are the product and service attributes necessary to attract customers without having to resort simply on price?

We at Fisher specialize in answering such questions. Give us a call if you would like to talk.

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Fisher International, by virtue of its deep expertise in the pulp and paper industry, provides insights, intelligence, benchmarking, and modeling across myriad scenarios. By arming companies with the knowledge that will help them gain a better understanding of their strengths and help identify weaknesses, Fisher is helping businesses stave off challenges and better position themselves for long-term growth.

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