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Defining the China market for Pulp, Paper and Board

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China accounts for the majority of growth in global paper and board output in recent years, and has supported demand for both market pulp and recovered fibre in an otherwise contracting global industry. Chinese demand for imported pulp accelerated in 2015-17 even as the economy slowed, profitability deteriorated further, and rationalisation of obsolete capacity continued. 2021 marked the start of the 14th five-year economic plan, and China remains the key variable for global fibre markets, but the drivers of Chinese demand are changing.

In spite of its importance, market research in China has typically been over-reliant on rudimentary assumptions regarding relationships between GDP per capita and paper consumption. Official statistics of paper production and consumption in China are too general and out of date to be of practical use, and in many cases are contradictory and unreliable.

Although the report incorporates all available published information, this is augmented by extensive primary research throughout the year. The report also identifies and analyses the individual drivers of paper production and imported fibre demand. A key element to the research is to define the production and consumption of higher quality grades of paper and board separately from the production of traditional papers based largely on non-wood fibres and locally collected wastepaper.

The report was first published in March 2003, and we have been encouraged by our subscribers to review and update the research on an annual basis. The report has become recognised by the industry as the most detailed and comprehensive analysis available. It is a vital tool for both strategic planning and sales and marketing. In addition to the report, subscribers benefit from continuous updates on the Chinese market and individual projects on request, throughout the year.

The following pages include a table of contents and list of figures and tables included in a typical Defining the China Market report.

About Hawkins Wright

Hawkins Wright is an independent consultancy providing a range of strategic, forecasting, market intelligence and business information services to the international forest products and bioenergy industries.

Since 1982 Hawkins Wright has provided authoritative and cost-effective services based on in-depth research of the global forest, pulp & paper and bioenergy industries. These services include private consultancy assignments covering a full range of marketing and strategic subjects as well as regular multi-client reports and newsletters.

Our consultancy services build on our global perspective of the macro- and micro-economic trends driving the international forest industry and downstream product markets. Assignments can range from advice on a client's business development or feedstock sourcing strategies to highly detailed market feasibility assessments of prospective projects.



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Although we concede that Old China production is difficult to measure, we maintain our view that the China Paper Association overstates paper and board production by 25-30 million tonnes.

Figure 5: New China v Old China, & CPA estimates of production, 1996-2015

Source: Hawkins Wright, CPA

2.1. Background to our research

This report is in its fifteenth year of publication, the first having been written in March 2002. At this point the New China industry was in its infancy and our figures for total output closely matched those reported by the China Paper Association. We have monitored the development of the New China industry very closely over the past fifteen years (see table 9 and the company profiles in the appendices) and witnessed a close correlation between the new capacities and the growth in imported pulp and wastepaper, and latterly domestically produced kraft pulp ('measurable' fibre).

We also see strong relationships between New China paper and board demand and macro-economic and demographic indicators. As with all manufacturing, most of this growth was orientated towards growth in urban demand and export sector activity which were both highly concentrated along China's eastern seaboard. In the past five years New China mills have been established in interior provinces as demand growth has spread, albeit at a slightly slower rate than had been experienced in the coastal provinces.

The growth in output suggested by the CPA over the period 2003-2012 would imply that growth from Old China mills using domestic fibres was actually faster than that of New China. This is highly implausible given the slower rates of economic growth in interior provinces and contradicts everything we know about the capacity rationalisation which has been an obvious feature of the industry over the past ten years. Gathering statistics across such a huge country is clearly a challenging task and the quality of Chinese data is frequently questioned by economists and commentators in other sectors. It is therefore unsurprising that we should find such discrepancies and contradictions in our own research.

Nevertheless, it is very important that we continue to raise these discrepancies, because such exaggerated growth in China has been used to exaggerate growth in global paper and board demand. Projections have also often been made off an inflated baseline, without understanding the relative and shifting importance of domestic and export orientated demand. Although we have not repeated all of the analysis reconciling Chinese data in this report, it is available on request.

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Anti-dumping and countervailing duties against Chinese coated paper have been in place in both North America and Europe since 2010. The US department of Commerce reviewed the ADD case in 2015 and in January 2016 determined that the revocation of duties would likely lead to a recurrence of dumping. Both the DOC and ITC will continue to review the ADDs and CVDs during 2016 but no schedule has been announced regarding the final determinations.

In October 2013 South Africa decided to impose antidumping duties on coated paper from Korea and China. The duties are 17.25% on South Korean papers (except Hansol and Arlone which are exempt), and 14.14% on Chinese paper. APP China and Chennung mills were named in the complaint.

Although there has been talk of introducing similar barriers in Brazil, India, Pakistan, and other Asian countries, so far no formal complaints have been lodged.

3.5. Outlook

We have revised down our forecasts for fine paper demand over the past twelve months. We now expect modest gains in uncoated paper demand to be largely offset by declines in coated paper.

Figure 26: Fine paper demand forecast assumption, to 2020

Source: Hawkins Wright

Following the recent start of the new machines by Sun Paper and UPM Changshu, there are no further investments in new woodfree machines. Certain old machines are to be re-purposed to make uncoated paper grades, and most likely more machines will be converted from printing and writing to specialty grade. There is around 2 million tonnes of surplus capacity, which may rise or fall depending on the trade balance and the speed of rationalisation.

Paper quality will continue to improve, although we note that much of the displacement of lower grade mixed furnish paper has already taken place.

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5. Specialty Paper

Although small in number and size, specialty paper mills are core customers for market pulp suppliers because they are less flexible in terms of their fibre consumption. Included in this category are manufacturers of cigarette papers, bank note papers, décor papers, thermal and electrical papers. The leading companies are listed below.

Table 15: Leading producers of specialty papers, 2015

| Company | Province | Grade | Capacity |
|----------------------------|------------------------|--------------------------------------|-------------|
| Welbon | Anhui | Wallpaper base & other | 70 |
| Anhu Jingfeng | Anhui | Cigarette | 10 |
| Anhu Mikitoku | Anhui | Insulating paper | 5 |
| Guangong Guanhao | Guangdong | Thermal, carbonless copy, labelstock | 175 |
| Mudanjiang Hengfeng | Heilongjiang | Cigarette, foil, plug-wrap, india | 105 |
| Yingde Industrial | Luoye, Henan | carbonless, greaseproof | 70 |
| Chenming Wuhan | Wuhan, Hubei | Glassine paper | 150 |
| Xiangfeng Specialty | Shaoyang, Hunan | Cigarette | 16 |
| Zhenjiang Dadong | Zhenjiang, Jiangsu | Stamps, invoice, food wrapping | 100 |
| Arlson | Binzhou, Shandong | Filtration, tea bag | 0 |
| Shandong Quming | Shandong | Decor paper - closed | 0 |
| Shandong Qifeng | Shandong | Decor paper | 210 |
| Shouguang Liben | Shandong | Carbonless | 15 |
| Chenming Shouguang | Shandong | Decor paper | 30 |
| Chenming Shouguang | Shandong | Thermal-sensitive paper | 100 |
| Sunshine Cj Specialty | Shandong | Decor paper | 35 |
| Jinfeng | Sichuan | Cigarette | 20 |
| Nine Dragons | Yan'an, Sichuan | Insulating paper | 50 |
| Hongta Blue Eagle | Yunnan | Cigarette | 21 |
| Minfeng Special Paper | Jiaying, Zhejiang | Glassine, copy, medical, cigarette | 120 |
| Minfeng Robert Paper | Jiaying, Zhejiang | Cigarette | 12 |
| Pulico Specialty | Zhejiang (in Shanghai) | Plug wrap, tea bag, coffee filter | 10 |
| Kingdecor Xianhe | Quzhou, Zhejiang | Decor paper | 60 |
| Zhejiang Hangda | Quzhou, Zhejiang | Plug wrap | 68 |
| Zhejiang Winbon | Quzhou, Zhejiang | | 55 |
| Huangzhou Huajin Specialty | Linan, Zhejiang | | 60 |
| Rongfeng Paper | Jiashan, Zhejiang | Cigarette | 3 |
| Hangzhou Huafeng | Zhejiang | Cigarette | 45 |
| Xianhe Specialty | Zhejiang | Cigarette, bible, dictionary, decor | 100 |
| Wellbon Longyou | Zhejiang | Wallpaper base & other | 30 |
| Total | | | 1755 |

Source: Hawkins Wright

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Chapter Six

Market pulp

1. The structure of the market

Chinese paper mills consumed 26.4 million tonnes of wood pulp in 2015, from 25.5 million in 2014. Around 9.1 was produced domestically and 17.3 million tonnes imported. The latter is all classed as market pulp but around 2.5 million tonnes may be tied shipments. The vast majority of these tied shipments are from APP Indonesia and Paper Excellence mills in North America to APP China paper mills.

We estimate there is up to 2 million tonnes of locally produced **kraft market pulp**, of which 75% is supplied by APRIL SSYMB (Rizhao). We estimate 0.6 million tpy of domestic **high yield pulp** might be sold as market pulp when prices are high enough. Much is sold locally as wet-lap and the quality is generally inferior to imported high yield pulps. In 2015 most of this volume was displaced by very competitively priced imported BCTMP.

The chart below shows that growth in underlying consumption of wood pulp has been decelerating each year since 2011. In 2015 we estimate consumption grew by around 0.9 million tonnes, of which over 50% was accounted for by tissue producers.

Figure 53: Chinese wood pulp consumption, 2009-2015

Source: Hawkins Wright

Despite the slow-down in underlying pulp consumption, Chinese imports enjoyed very strong growth in 2015 largely due to the decline in local pulp production.

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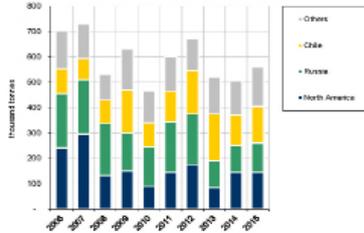


Sample pages

2.5 UKP

UKP imports have trended downwards over the past few years, partly due to supply side issues and partly because Chinese liner producers have increased the proportion of recycled fibre in the furnish. Some analysts have proposed that the utilisation rate has reached a peak and will start to reverse as yields deteriorate in the coming years. This could encourage a revival in UKP demand, although much will depend on containerboard production, and the export availability of OCC from the USA. American OCC contains a high proportion of kraftliner produced by integrated US mills. These mills also increase sales of roll pulp when UKP prices rise or supplies from dedicated baled suppliers is restricted. So far, at least, this has been sufficient to balance the market.

Figure 60: UKP imports, 2006-2015



Source: Customs data

2.6 Imported pulp forecast

In calculating our pulp import forecast, we first determine total wood pulp required implied by our forecasts of New and Old China paper production. We then subtract the forecast of locally produced pulp in order to determine the import requirement.

Table 23: Imported pulp forecast, 2011-20

Table with 11 columns (years 2011-2020 and increase 2015-20) and rows for various pulp types: BSKP, BEKP, Indonesian BKPK, Other BKPK, DCTMP, Total bleached, UKP, and Total pulp.

Source: Customs data, Hawkins Wright

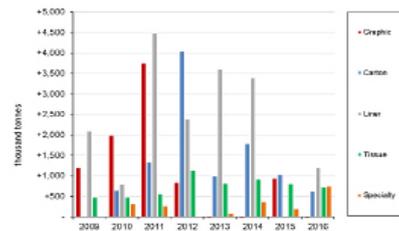
Chapter Eight

Capacity expansions

1. Summary

Table 26 and figure 64 summarise the individual investment plans which are listed by company in tables 29 to 33. Capacity growth has declined steadily from 10 million tonnes in 2011, to 3 million tonnes in 2015. Although a further 3 million tonnes have been proposed in 2016, it is highly likely that many projects will be postponed to 2017 or beyond.

Figure 64: Summary of investment plans, to 2016



Source: Hawkins Wright

Table 26: Summary of investment plans, to 2017

Table with 8 columns (years 2011-2017 and Total 2011-17) and rows for various investment categories: Newplant & mixed furnish, UWF, DWF, Total Graphic, Containerboard Converting, Total Packaging, Tissue, Specialties, Total others, and TOTAL.

Appendix Three: Mill database

In the following pages we describe the operations of those companies which comprise 'New China'. The paper and board machines installed since the mid-nineties are the base for our calculation of 'New China' capacity.

Companies with operations across China are listed first. Thereafter companies are listed by province, starting with the key provinces; Shandong, Jiangsu, Zhejiang, and Guangdong. The other provinces follow, listed alphabetically. Maps showing the location of the mills/projects in the four key provinces can be found at the back of the report.

Table listing national and international group companies (1-16) and Shandong companies (2-22) with their respective page numbers.

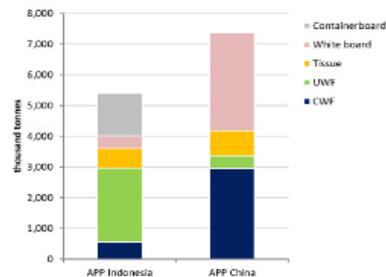
1. National and international group companies

1.1. APP China (Sinar Mas Group)

The Asia Pulp and Paper Group (APP Group) is one of the largest vertically integrated pulp and paper companies in the world. Combined pulp, paper, and board capacity across China and Indonesia is over 16 million tonnes. Asian pulp capacity is over six million tonnes, of which 3.5 million in Indonesia and 3 million in China. The group controls a further 2.5 million tonnes of pulp capacity in North America and Europe through its affiliated company, Paper Excellence. The company employs over 35,000 and markets its products in 65 countries, across six continents. Asia Pulp and Paper is part of the Sinar Mas Group.

APP China owns around 20 pulp and paper companies in China and more than 20 forestry centres. Annual installed paper production capacity is around 8 million tonnes, as detailed in Table 1. APP also runs several converting facilities including, Yalong (stationery/copy paper) in southern China, Jin Xin (copy paper) Gold Hai (corrugated cartons), and Ningbo (corrugated and folding cartons).

Figure 1: P&B production estimate, 2014



Source: Hawkins Wright estimate

The bar chart represents production which is somewhat lower than installed capacity owing to the fact that certain machines have only recently been installed.



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