

A VIRTUOUS CIRCLE

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A VIRTUOUS CIRCLE IS CREATED WHEN MILLS ENGAGE SUPPLIERS IN DEFINING AND SETTING STRATEGIC DIRECTION, RESULTING IN A POTENT RELATIONSHIP.

PAPER COMPANIES ARE CONSOLIDATING ALONG GRADE lines and divesting assets across grades. Global competition and lower prices have resulted in shrinking margins. More than ever, papermakers must build a solid strategic platform on which to compete for success. Engaging suppliers in defining and setting strategic direction can result in a “virtuous circle,” creating mutual competitive advantage.

COMPETITIVE COST POSITION DRIVES STRATEGY

A mill’s strategic direction within a grade is determined by its competitive cost position. Cost positioning drives a mill to choose between operational excellence within a grade or product differentiation between grades. The strategic options available to a mill become quite apparent when the cost competitiveness of the mill is compared to that of other mills in the same grade, as in Fig. 1, which uses coated groundwood as an example.

Price-competitive mills

If a mill sits on the left side of the chart shown in Fig. 1, cost efficiency is its competitive advantage. The mill’s strategy must be operational excellence. Finding ways to maximize output and sales at market prices should be the goal of these low-cost producers. All projects and activities should focus on improving efficiency, speed, and output.

Value-added mills

If a mill sits on the right side of the cost competitive scale, it can’t use price as a competitive advantage. Eight years out of 10, the mill will produce paper at or above the market price of the commodity product in that par-

ticular grade. Product differentiation and cross-grade competition are crucial. Only by developing unique, value-added products will the mill be able to sustain market share at prices that allow long-term profitability.

Successful cross-grade competition requires a flexible organization that can change product attributes to satisfy changing consumer demands. Speed and flexibility are the competitive advantage for mills that can’t compete on price.

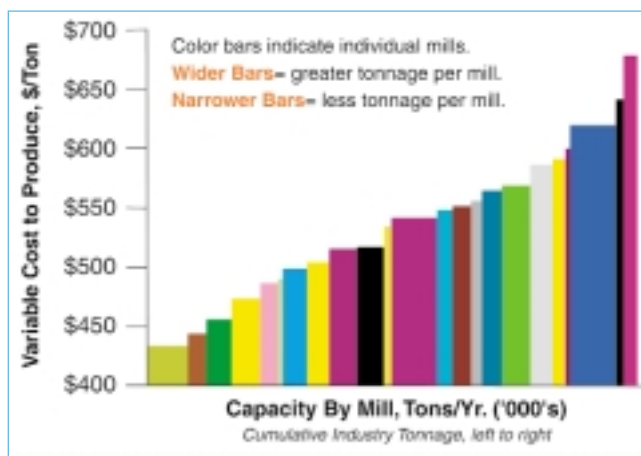
The muddled middle

If a mill sits in the middle of the competitive scale, it has a strategic challenge. Can the mill compete long-term on operational efficiency? Or would it be better off working on product differentiating strategies?

Keep in mind that the competitive scale is not static. When a new mill or machine is built, it typically appears as a new, lower bar on the left side of the chart, moving the other mills to the right. Think of the chart as a live, moving scale. The speed of that movement and its effect on market pricing are important factors in deciding the muddled middle’s strategic direction.

It’s easy to think it’s possible to cut costs and differentiate products. Unfortunately, the type of mill

operation and the logistics needed to achieve each are exact opposites of one another. Operational excellence demands volume, not flexibility, while product differentiation demands flexible production and a supply chain that can handle broader and changing lines. The muddled middle mills must decide on a specific direction before real progress toward sustainable returns can be attained.



1. Coated groundwood capacity vs. cost to produce

COST POSITION IS NOT EASILY CHANGED

The primary determinants of cost competitiveness are pulp and machinery. Pulp costs are driven by the level of integration, geography, and volume consumed. Machinery costs are driven by size and speed. These costs cannot be changed without significant capital investment. Often, based on historic returns in the paper industry, new capital is not justified, so achieving these two strategies demands exploration of new frontiers in technology.

The search for enabling technology drives the need for stronger supplier relationships. To meet developmental demands and achieve long-term competitiveness, mills need suppliers that can provide more than just products. Increasingly, the only suppliers that add value are those with deep technology wells.

ACHIEVING PRODUCT DIFFERENTIATION

If a mill is not cost competitive within a grade, incremental operational improvements, while always beneficial, can't ensure long-term survival. The mill must adopt a strategy of product differentiation across grades. Cross-grade competition is evident in almost every area of papermaking; currently, the most dynamic areas are in groundwood papers and paperboard.

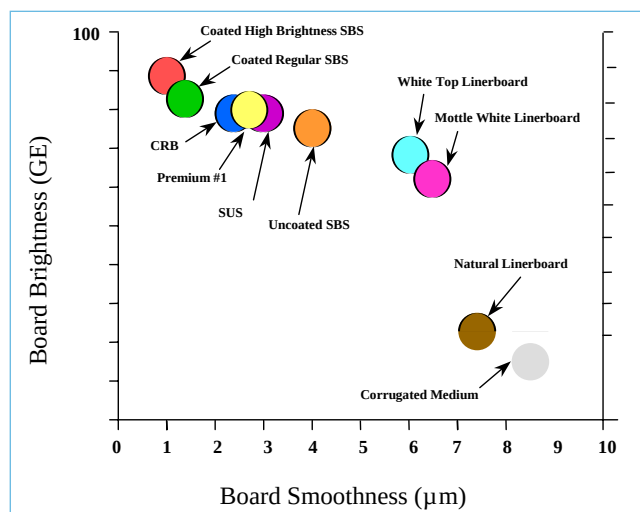
Today, there is considerable effort by papermakers to move up the product quality scale in groundwood papers. From newsprint through LWC, innovation has created new market niches and value-added products for consumers.

Mills in a commodity grade tend to move their production up the price/quality scale to the next highest grade. For example, newsprint makers continue to enhance their sheet and improve the acceptability of their product for consumers.

New "coated" newsprint is an example of applying new, unique size press and coating technology to create product differentiation. Supercalendered papers are another example of creating competition across grades. The SCA+ plus papers have put considerable pressure on ULWC producers by providing a grade between two existing market products.

The challenge is to find ways to differentiate products. Can technology be designed, for example, for SCB producers to create an SCA grade without investment in additional calendering equipment? Technology applied to these mill-specific challenges can accomplish the goal.

One of the better techniques for uncovering product differentiation opportunities is to create strategic maps that plot out the market in different ways. **Figure 2** maps the paperboard market based on two factors: brightness and paper print smoothness. A large number of grades populate the upper left, corrugated medium populates the lower right, and a significant amount of white space populates the middle.



2. Paperboard brightness vs. smoothness

The white spaces are all areas ripe for product differentiation. The evidence of this phenomenon is the movement by Smurfit-Stone Container Corp. and others into the coated white top linerboard market. This product fills an unmet need in the market.

Product differentiation is not a zero sum game among competing suppliers. Creating and defending paperboard market share versus other forms of packaging will determine the fate of more papermakers long term than the actions of competing mills. Improvement in flexo printability, for example, will increase the acceptance of linerboard products as the primary shipping and marketing vehicle for Internet retailers.

Consumer trends all point toward increasing degrees of differentiation. Consumers are purchasing more and more luxury and convenience goods. The wealth effect of the stock market has created demand for product differentiation as consumers try to fill increasingly specific wants. The era of mass customization is here, and that leads to more demands on the functionality of packaging materials.

As consumer demands drive differentiation, the solutions required to satisfy the demand also become increasingly specific. Differentiating solutions will be mill, machine, and grade specific. Technology exploration must deliver customized solutions based on the unique opportunities and constraints faced at each mill.

ACHIEVING OPERATIONAL EFFICIENCY

The low-hanging fruit in most mills already has been harvested. Real efficiency improvements must come from implementing new and novel technologies. If a mill is a competitive low-cost producer within a grade, incremental improvements in efficiency will yield significant profits.

Consolidation: the market power myth

The industry is in the midst of the largest round of consolidation ever seen in paper. Many theories are offered to explain the trend, including the “market power” myth. The market power theory holds that the more market share a paper company has, the better its ability to affect market price.

Following the market power theory, then, a large paper conglomerate with small shares in any given grade, but a large share overall, will not have additional market power. To affect market price, a paper company must have significant market share in each of the grades it sells. Consolidation along grade lines and divestiture across grades is the method companies use to gain market share in a given grade.

The natural question is, “How much market share is needed to impact selling prices?” There are no hard and fast rules that say a given level of market share will translate into a certain degree of price improvement. However, one of the best examples, based on empirical evidence, comes from the airline industry prior to deregulation.

The U.S. government studied and compared flight segment prices and market shares by route. The evidence showed that until one carrier had at least 75% of the market share for a specific route, prices would remain competitive. This evidence is not directly transferable to the paper market, but applying a 75% threshold, consolidation that brings a “meager” 10% to 40% share of a grade to one producer probably won’t have an effect on market pricing.

Focus on efficiency

Since the market power game is difficult to translate into direct price improvement, the focus must remain on operational efficiency. A cost-competitive mill is a cost-competitive mill regardless of market share. This means that a small player within a grade will return significant profit, provided it has a sales channel for its production. The converse is also true: if a large market share player has high-cost mills, consolidation will not bring the market power necessary to provide long-term profitability.

Efficiencies are often mill-specific and involve many operations. Recent technologies such as high-strength coating binders, faster-drying hollow pigments, and new load-optimizing calender technology are all examples that allow greater efficiencies.

Using new methodologies to search out solutions is one way to achieve breakthrough improvements. Six Sigma, Knowledge Management, and TRIZ methodologies have all been used to improve current operations and explore entirely new ways of thinking. The power of these methodologies is improved when used with an entire value chain. For example, bringing a key supplier, paper

company, and key printer together for a joint Six Sigma project can define and uncover complete value chain efficiencies. Intense sharing and dialog with strategic suppliers are critical to the successful exploration of operational efficiencies.

TECHNOLOGY HOLDS THE KEY: A MACROECONOMIC VIEW OF PRODUCTIVITY

In a recent speech,¹ Alan Greenspan discussed Multi-Factor Productivity (MFP) and its positive effect on worker productivity. The macroeconomic model Greenspan referred to states that Output is a function of Technology (MFP) applied to Capital and Labor. The only way to increase output is either to increase factor inputs (capital and labor), or to improve technology. Technology determines the overall effectiveness with which the economy uses capital and labor to produce output.

The real key to significantly improving mill productivity, therefore, is the same key that Greenspan attributes to much of the growth in U.S. productivity—technology. In the paper industry, labor and capital have been rationalized. Technology is the only productivity lever left to be pulled.

Real technological change can only come from working toward the “virtuous circle.”

THE “VIRTUOUS CIRCLE”

Merriam-Webster’s Collegiate Dictionary defines “virtuous” as potent. A virtuous circle, then, is created when mills engage suppliers in defining and setting strategic direction, resulting in a potent alliance.

Competitive cost position will drive a mill toward a strategy of either operational efficiency or product differentiation. Achieving your desired strategy, however, is dependent on your view of market opportunities and your belief in what’s technically possible. Likewise, suppliers are limited in the offerings they bring, because of the same biases the mill faces. Suppliers see one view of the market and overlook unique technology applications because they see only part of the picture.

Both perspectives—market view and technical possibility—can be expanded and enhanced when mills engage suppliers that have a deep understanding of the market and technology. Only through engaging suppliers in strategy-defining exercises can specific, customized, total solutions be developed that allow mills to achieve their competitive position. This virtuous circle can only be driven by a fundamental well of technology that can be shaped and applied to a mill’s specific strategic challenge.

¹Greenspan, Alan, “Business Data Analysis,” speech to the New York Association for Business Economics, New York, June 13, 2000.

The virtuous circle, illustrated in **Fig. 3**, is the key to attaining sustainable competitive advantage. The inherent frictions in this process, however, often cause the circle to break down.

The virtuous circle typically has the potential to break down in one of two ways. First, mill and supplier rarely open up the discussion on strategic direction to the extent needed. That discussion needs to happen across levels and functions, from production floor to head office, mill to marketing, and the equivalent parties with the supplier. The biases to change can only be overcome by engaging at a deeper level.

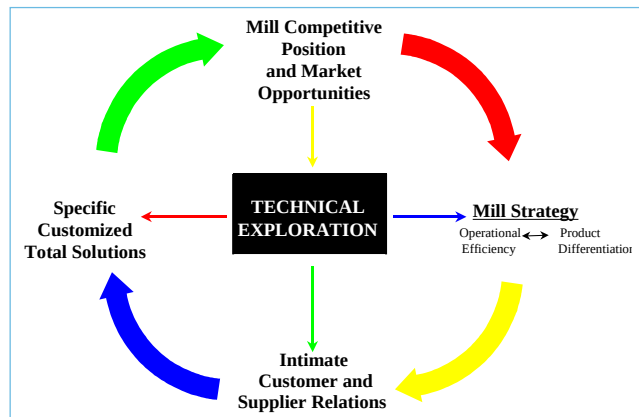
Second, the virtuous circle is only rhetoric if the supplier does not possess a deep technology well. Suppliers must have the capability to design and deliver specific mill solutions to offer any competitive advantage.

COMPETITIVE SUCCESS

Sharing a common vision with strategic suppliers allows them to use technology to create specific, customized solutions. Suppliers that possess an intimate understanding of your competitive position in the market and your strategic direction for the long run are the ones that will deliver the most value.

Applying technology in a relationship with shared vision, shared power, and shared accountability can indeed result in a virtuous circle that allows a mill to achieve its desired competitive position. TJ

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3. The virtuous circle