The US cutting-tools market: What changes lie ahead?

A new approach to segment strategy, distribution, and pricing can help companies win in the evolving cutting-tools market.

Nick Santhanam, Jannick Thomsen, Xiaoran Tong, and Shekhar Varanasi
Cutting tools—end mills, drill bits, and other implements that remove materials—are essential components of machines used in multiple industries. If you need a hip replacement, doctors rely on devices equipped with cutting tools to shape the implant and associated bone. Within the defense sector, cutting tools enable the creation of the specialized ships, vehicles, and planes that move troops. And within the oil and gas industry, they make precise incisions in wells and pipes. These are just a few of the many applications for customized cutting tools that come in all shapes and sizes.

For the past few years, growth within the US cutting-tool sector has been about 1.5 percent annually—roughly in line with GDP. Over the same period, the market continued to consolidate, with cutting-tool companies undertaking more than 200 mergers and acquisitions, totaling more than $4 billion in value, since 2000. These transactions have allowed companies to enter new market segments, gain access to additional customers, and expand their portfolios—some of the best strategies for gaining share in this flat market.

Although growth is slow, cutting-tool vendors can capture additional value if they anticipate the changes ahead and adjust their long-term strategies. To assist them, we examined recent market trends, combining research data with insights obtained from interviews with more than 50 executives of cutting-tools companies as well as their major distributors and customers. Our analysis revealed some important dynamics. Overall growth will remain stable, but the customer base will shift as demand for cutting tools rises in some industries and drops in others. All customers will consider a variety of factors when making a purchase, but distributor recommendations will be paramount. We also discovered that companies can unlock value if they revamp their distribution networks and pricing approach, two areas that have often remained unchanged for years out of habit or inertia.

### Shifting demand within the customer base
The US cutting-tools market has a total available market of about $5 billion, with most value coming from milling (about 38 percent of the total) and hole making (about 20 percent) (Exhibit 1). In both areas, indexable tools—those with removable cutting tips—are growing at a higher rate than solid tools, both carbide and non-carbide, because they’re less expensive and easier to repair.
Overall demand for cutting tools will continue to grow at the same rate over the next few years, with indexables still outpacing solid tools. But there will be a big change in the source of growth, since most customers are in cyclical industries that alternate between expansion and contraction. The aerospace sector, which generated most of the demand for cutting tools from 2012 through 2017, will now fall behind other sectors that are seeing higher growth, including the defense sector and the resurgent oil and gas industry (Exhibit 2).

Demand within the medical sector—the only noncyclic industry that vendors serve—will remain

Exhibit 2

The industries responsible for most growth are shifting as demand for cutting tools evolves.

Change in compound annual growth rate (CAGR)

<table>
<thead>
<tr>
<th>Hole making</th>
<th>Aerospace</th>
<th>Automotive</th>
<th>Electricity/telecom</th>
<th>Oil</th>
<th>General machining</th>
<th>Medical</th>
<th>Defense</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indexable2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indexable2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid carbide (overall)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid carbide (miniatures)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid non-carbide (overall)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid non-carbide (miniatures)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other cutting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Includes chemical processing, construction, paper and pulp, power generation, and other unclassified industries.
2 Indexable tools are those with removable cutting tips.

Source: Dedalus Consulting; The Freedonia Group; interviews with industry bodies, suppliers, and distributors; Kentley Insights; market reports; Technavio; United States Cutting Tool Institute
The US cutting-tools market: What changes lie ahead?

Factors influencing purchase and retention rates
How do customers select cutting-tool vendors in this complex and changing landscape? In our interviews with customers, one consideration topped all others: distributor recommendations. As new cutting tools are constantly entering the market, customers appreciate distributors that understand available offerings, potential use cases, and the latest innovations. One executive noted, “Local distributors have extensive knowledge of different catalogs. They provide first-line input on what to use and which brands to select from when there is a new application.” This attitude may discourage many customers from migrating to large online retailers for purchases—a trend that’s already happened in many other industries (see sidebar, “Can large online retailers establish a presence in the cutting-tools market?”). Customers also considered referrals or advertisements for cutting tools when considering vendors, but these carried less weight than distributor recommendations.

When managers moved to the purchase stage, they primarily based their decision on tool performance. In fact, many wanted to try tools out in the field before making a decision to evaluate heat dissipation and other factors. Quality, reliability, and tool life also factored into manager decisions. Managers tended to stick with the brand they originally purchased when choosing tools for future projects, giving the sector a retention rate of over 75 percent. In our interviews, customers were most likely to investigate new offerings if they had a new application that the original tool manufacturer did not support, or if they encountered problems related to quality or reliability (alloy and coating issues may reduce a tool’s life-span or cause performance issues). Some customers also cited difficulties interacting with manufacturers—for instance, insufficient technical support—or a lack of innovation.

A strong distributor strategy
Given the importance of distributors, we investigated how companies are working with them. We found that most cutting-tools companies deal with a broad range of distributor networks in the United States. These networks range in size, with some having fewer than 100 branches and others over 450. But cutting-tool companies haven’t traditionally given a lot of thought to the location of these branches—they just looked for distributors that had branches near industrial hubs, many of which are now in decline. Since their distribution footprint hasn’t kept pace with demand changes, cutting-tools companies may have little coverage in prime locations. Likewise, their distribution partners may have too many branches in declining industrial areas. This imbalance is more than just an organizational issue, since distributor recommendations have the most weight in purchase decisions.

So how can companies determine where they need distributor representation? One clue may come from machinery-manufacturing activity and its contribution to GDP. Cutting-tool companies could quantify this metric for each major metropolitan service area (MSA) in the United States to classify markets into three categories: small, medium, and large. For an even more insightful analysis, they could estimate the compound annual growth rate in machinery-manufacturing GDP for the next few years, again dividing it into three categories (low, medium, and high). The necessary distribution footprint then becomes obvious: small MSA markets with limited growth would have the lowest number of distributors; big areas with high growth would have the most. All other MSA categories would fall somewhere in between (Exhibit 3).

Analyzing the distribution footprint isn’t a one-time exercise, since companies should regularly look...
More nuanced pricing

Beyond distribution, cutting-tools vendors can also gain a competitive advantage in a flat market by developing a strong pricing strategy—one that goes beyond margin and looks at other ways for capturing value. The following elements will be critical.

Getting the right value from low-volume SKUs

If a company can’t supply a cutting tool when needed, customers might switch to a vendor that guarantees immediate availability because they can’t afford downtime. That imperative compels cutting-tool companies to stock SKUs that are generally in low demand in each MSA and make adjustments as needed. They should also consider using distributors with a national footprint—a move some companies, especially small to midsize businesses, are already beginning to take. Moving to a large distributor requires 5 to 10 percent more margin, but companies recoup this outlay by getting larger orders. Our interviews revealed that some executives believe national distributors will make their companies stronger over the long term. One manager stated, “The distribution industry has seen a lot of consolidation. The small local guys are vulnerable in the long term.”

Exhibit 3

Companies should optimize the distributor footprint to reflect market size and growth.

GDP in machinery manufacturing across US metropolitan services areas (MSAs)

<table>
<thead>
<tr>
<th>MSA GDP size</th>
<th>MSA market growth, 2015–20</th>
<th>High (&gt;2.0× market)</th>
<th>Market (1.5% CAGR)</th>
<th>Low (&lt;0.5× market)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (bottom 40% of market)</td>
<td>Maintain distributors</td>
<td>Increase distributors</td>
<td>Decrease distributors</td>
<td></td>
</tr>
<tr>
<td>Medium (40–80% of market)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large (top 20% of market)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Compound annual growth rate.
Source: Moody’s Analytics; US Bureau of Economic Analysis
Can large online retailers establish a presence in the cutting-tools market?

Our interviews showed that customers often order or reorder cutting tools through online channels, typically relying on those maintained by distributors and suppliers. While most buyers haven’t used less specialized e-commerce sites, they stated that they’d be willing to try them. In the short term, however, large online retailers that offer a wide range of products will be at a disadvantage, since customers want their providers to provide technical support and personal assistance. In our interviews, one customer noted, “I feel confident when I can call the tech support [at my distributor], send them my drawings, and have someone knowledgeable provide me the support I need.”

Other factors also work against large e-commerce sites. For instance, most only stock cutting tools with standard SKUs, which limits their appeal to buyers that need specialty products. Further, most local distributors offer rapid deliveries that are just as fast, or even faster, than those from large online retailers. One manager noted, “We have a very close relationship with local distributors. They sometimes do twice-daily delivery for me, which is not what e-commerce can beat.”

demand, even though this raises inventory costs. When pricing these SKUs, most companies follow the same formula that they use for high-demand products that fly off the shelves and are constantly restocked. They’d be more likely to increase revenues by developing a strong understanding of customers and their needs, including the average time between purchases for particular products. Companies could then create pricing strategies that factor inventory expenses, including the high carrying costs for low-volume SKUs, into the equation.

Gaining better intelligence about competitive pricing
As the cutting-tool market consolidates, many companies are trying to differentiate themselves through lower pricing. They must keep a close eye on their competitors to set optimal prices, but it would be impractical to obtain detailed knowledge on every tool in each market. Instead, they should develop a detailed view of important trends that could affect pricing, such as growth in specific product categories, end markets, and distribution channels. Companies should also monitor pricing in segments where they have traditionally had a strong presence as well as those where they would like to increase their market share.

Bundling value-added services with tools
When companies set prices, most focus only on the cutting tools themselves—their manufacturing costs, the desired profit margins, and how much customers might be willing to pay. But they might capture more value if they bundled charges for customer service and support with the tool price rather than covering these under a separate contract. For instance, when selling a particular tool, companies might promise to provide 24-hour support or agree to send out a repair person within two hours of a breakdown. Customers that want to keep production moving will easily recognize the benefits of these services, especially if they’ve previously experienced delays in getting...
distribution networks and pricing strategies. With the market continuing to evolve and become more competitive each year, cutting-tool companies that remain stuck in the past may never regain lost ground.

Nick Santhanam is a senior partner in McKinsey’s Silicon Valley office, where Xiaoran Tong is an associate partner and Shekhar Varanasi is a partner. Jannick Thomsen is a partner in the New York office.

Designed by Global Editorial Services.
All rights reserved.