RESEARCHING CAPACITY UTILIZATION

As the economy begins to show signs of improvement, some companies are already thinking about capacity constraints. Having cut back on labor and machinery during the recession, manufacturers are facing customer inquiries about their production capabilities. Capacity utilization, in many industries, is on the increase. This trend is leading some to think about increasing their capacity. And their next thought is…as orders start to come in, could competitors be caught with too little capacity to respond to customer needs. ***What are our competitors doing about capacity at this juncture?***

The following white paper defines actual and potential utilization, discusses how researchers determine capacity and whether companies are increasing capacity or not, delves into the speed of capacity increases, and covers the actionability of all this intelligence.

Definition – Actual and Potential Utilization

According to Wikipedia, capacity utilization "refers to the relationship between actual output that is produced with the installed equipment and the potential output which could be produced with it, if capacity was fully used." The problem with this definition, however, is that in many industries the potential output – the total capacity – is ambiguous.

A piece of machinery which has been allowed to languish without maintenance or repairs is not currently contributing to the company's capacity. But how long would it take to get this machine operational again? The night shift was laid off last spring. How long would it take to hire enough of them back to get the production line operational for an additional shift? If costs per unit do not rise above their current levels and production can still be increased, there is still excess capacity. But if the Company must pay a higher per unit cost to produce more units (because it must build a new facility or purchase new equipment, for example), it is operating at maximum capacity.

An 80% capacity utilization is generally thought to be the sweet spot. It is generally believed that when utilization reaches 85%, price inflation is expected. Similarly, when utilization rates fall below 75% for an industry as a whole, it is in a recession. (Current manufacturing capacity utilization rates for the country as a whole are below 75%.)

Determining Capacity

In conducting research-based strategy consulting assignments, we are often tasked with determining the capacity of an industry or of a particular competitor. Is competitor X operating at full capacity? Would it have to turn away a large order if it came in tomorrow? Should we start to take the steps

necessary to increase our production capacity?

In order to answer these questions, the client needs tangible facts. These facts can be derived in interesting ways. For example, a consulting firm once needed to determine the capacity utilization levels of a major brewery. It determined that the weight of rail cars would be a critical component in determining capacity. It hired a metallurgist to study the changes in the thickness of rust on the train track to calculate the weight of the train cars passing over it.

But human intelligence is much more reliable. Getting an employee to state specifically what level of capacity the plant is operating at, is obviously preferable. However, this information is sensitive and might not be gained ethically. If this is the case, current customers of the manufacturer may be able to tell you their perceptions of their supplier's capacity levels.

Clues of Increasing Capacity

In some cases, it is critically important to determine whether or not a competitor has already begun the process of increasing capacity. In many industries, one major supplier's increased production capacity could have a major impact on pricing levels for the industry as a whole.

We once needed to determine, definitively, if a major food processor had begun to increase production capacity. We started the research process by thinking about all of the clues that would indicate whether or not production capacity were being increased. Some of the clues involved EPA permits, local water authority requests, filing for extensions to rail lines, local building permits for new construction, and other publicly available information. Other clues involved asking specific questions of employees, which, on the surface, were innocuous and non-threatening. By addressing all of the clues, we determined that ten of the twelve indicators were positive. In other words, w demonstrated, with a high degree o confidence, that the manufacturer was embarking on a process to increase production capacity.

The Speed of Increasing Capacity

One problem researchers have in trying to calculate current vs. potential capacity concerns the timing of changes that increase capacity. In some industries, such as food processing, the bulk and size of ingredients involved requires massive equipment and logistics requirements. The timing of a major capacity change can be measured in years. In other industries, increasing capacity may be as simple as hiring employees for an additional shift or buying a simple extension for a piece of equipment. The rule of thumb in calculating potential capacity is largely a matter of time. If the capacity can be increased (again without increasing unit costs) in less than a month, we think of this as current capacity. If the change requires more than a few weeks of planning, transitioning and executing, we think of this as potential capacity.

Actionability of the Intelligence

Companies considering hiring a research-based strategy consulting firm should recognize at the outset that determining a

competitor's capacity is only valuable if you will act upon the information. Knowing a competitor's production capacity utilization levels, its plans to increase capacity, or its potential reactions to another competitor's increases in capacity enables your company to make capacity decisions of your own. Good intelligence should lead to analysis, options, and recommendations from your research-based strategy consulting firm.

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