

Supply Chain News: Sourcing Optimization Technology Part 2

Optimization Can Deliver Big Benefits, but with Much Change in Process Required; Finding the Sweet Spot

SCDigest Editorial Staff

Earlier, we reviewed part of a new report from the CAPS Research organization on the opportunity for "sourcing optimization" software tools to be used by procurement professionals. (See [The Increasing Role of Optimization in Sourcing Decisions](#).)

The CAPS report was written by **Dr. Larry Guinipero** of Florida State University and **Dr. Philip Carter** of Arizona State University, which sponsors CAPS Research. The full, highly-detailed report is available at the [CAPS Research web site](#), with free registration.

Sourcing optimization technology uses a combination of mathematical models, computer software, and computer hardware to analyze a large number of supplier bids and business scenarios to identify an optimal sourcing decision. While the use of such tools and processes has been common in transportation sourcing (Carrier Bid Optimization), it has not been frequently employed in other product categories – until recently. That change has occurred as companies recognize the growing complexity of sourcing processes in many product and commodity areas, and as they also look to gain greater synergies across divisions or regions in their procurement spend.

After reviewing some of the basics last time, this week we look at the benefits and keys to success.

Guinipero and Carter identify a number of potential benefits from using optimization technology in sourcing. Those include:

- Increase buyer productivity

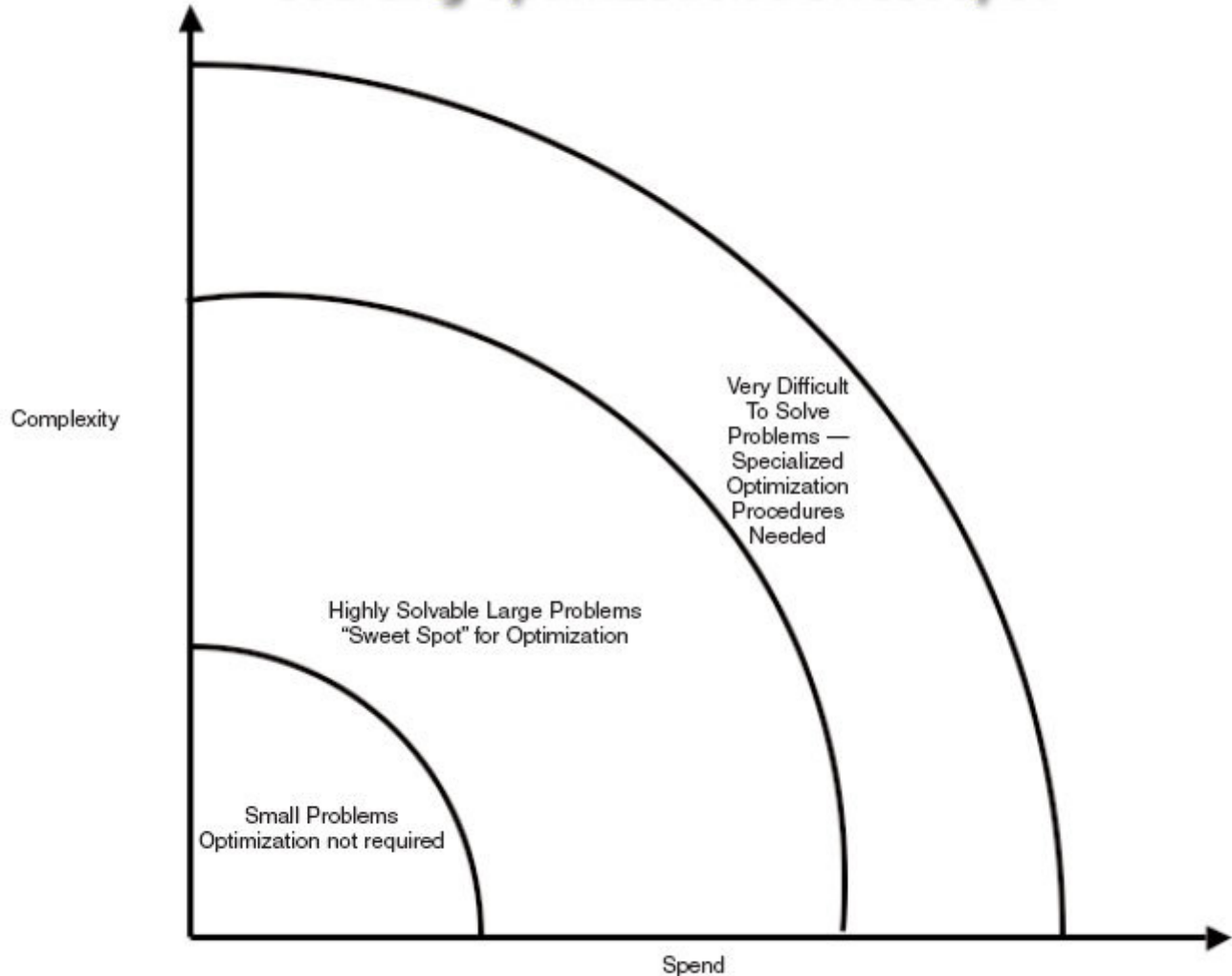
The real sweet spot are those products and buys in the middle, where there is enough spend and complexity that the analysis and optimization can really deliver savings, but where the level of complexity is modest.

- Faster analysis than with spreadsheets
- Reduced cycle time for a complex bid process
- Greater depth of analysis for bids
- Ability to consider a greater number of alternative bids
- A process forces supplier bids to be of higher "quality" (more detailed)
- Forces normally "reactive" buyers to be more proactive and do more planning
- Significant spend reduction (10% savings are common)
- Ability to better understand the impact of increasing spend with specific suppliers
- Better visibility to trade-offs in price, service, number of vendors used, etc.
- Structure that produces more creativity to improve the bids/solutions
- Both buyer and seller are encouraged to look more specifically at cost drivers

As just one example of how this ties together, Guinipero and Carter cite a case study of one company that first used such a tool to look at all bids

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Sourcing Optimization's Sweet Spot



Source: Guinipero and Carter, CAPS Research

across all suppliers for a particular set of products. It then filtered the results to only look at those suppliers with a 97% or greater service level.

By "comparing this solution with the first solution, the sourcing team could clearly see the increased cost of only using suppliers with superior service records," Guinipero and Carter write. "This addi-

tional cost would be compared with the cost of holding additional inventory if the lower-cost suppliers with inferior service records were used."

Where is the Sweet Spot?

Not all products/services are well suited for sourcing optimization.

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Some categories are of course simply too small/simple for the effort or return from using a sourcing optimization tool and process.

At the other end of the spectrum are very, very large and complex buys, for which the optimization software likely will have to be customized to meet the buying requirements - and even then may not be able to identify a true optimal and/or feasible solution. Guinipero and Carter say, however, that even in this case, the tool may still be useful for analytic support.

The real sweet spot are those products and buys in the middle, where there is enough spend and complexity that the analysis and optimization can really deliver savings, but where the level of complexity is modest enough that the process can be managed with the tools "out of the box." (See graphic page 2.)

There is a tremendous amount of detail in the full report about the requirements for sourcing optimization success, the process models used, and a wealth of other data.

A few key points stand out:

- By its nature, use of sourcing optimization tools and processes will tend to drive a greater level of procurement centralization in a company
- This move often represents a dramatic change for procurement managers - much attention needs to be paid to training and change management issues (the report offers a number of smart suggestions in this area)
- That is equally true for suppliers, many of whom may never have gone through such a process; often, the supplier issues center around the sheer volume of data they are required to provide
- Including non-price attributes in the bidding processes is not easy, but can be done by "monetizing" some attributes, such as quality

Guinipero and Carter note that "While the application of optimization in supply management is still in its infancy, early adopters of the technology envision ever-increasing use."

They foresee two complementary paths: (1) ever more user-friendly and simple to set-up versions that will lead to broader use within an organization; (2) increasing advances in underlying capabilities that expand the number of products and the level of complexity where such tools can be used effectively.