



# PRICING CUSTOM PRODUCTS WITHOUT A STANDARD

As companies start their lean journey, they are eliminating the standard cost accounting systems, but are not sure what to do about pricing—particularly for custom products.

This article provides a bridge from the standard cost world to lean accounting.

## COST SYSTEM

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**W**hile preparing to contribute to the Lean Accounting Summit this past September, I was gratified by how well discussions regarding the elimination of standard cost accounting and lean measurements were covered. However, despite presentations on “How to Hold a Successful Kaizen Event,” “Easier, Simpler, Faster: Information Systems in a Lean Organization,” and a panel discussion of lean implementation of direct costing to attendees who were eager to learn about lean concepts, theories, and the practical experience of accountants in real companies, one question kept recurring throughout the conference’s sessions and during the networking opportunities:

*“How do I price a product without our standard cost system?”*

You do not have to already work in a company that has adopted a lean strategy to know that pricing products should be based on what will the market bear or what will the customer pay, not on your company’s cost structure. In his keynote address, Dr. Tom Johnson described it beautifully, “. . . it is not knowing the product cost, but what it costs to make your products.” The customers will pay what they will pay. Nonetheless, concerns and questions linger

for custom products. “What will the customer pay” is not always an easy value for the customer or the company to identify. So this question evolves thusly:

*“How do I price a custom product without our standard cost system?”*

To answer this question, first decide what you want to achieve in selling the custom product. Do you want to add to bottom line profit incrementally without regard to margin percentage? Or do you want to use the custom product to increase bottom line profit only if it improves margin percentage?

The purpose of this article is to provide a model to position the pricing without a standard cost system. The model provides a means to price the product while accounting for the true variable cost components of the product, the material, and the utilization of constrained resources. The pricing model assumes that all other costs of the organization are not variable and will be consumed regardless of whether the custom order is sold. The model also assumes

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### EXHIBIT 1 Lean Custom Product Pricing

Custom Order:	Example A	Example B
Material Content	\$15,000	\$5,000
Material Mark-up	2.5x	2.5x
Possible Price	\$37,500	\$12,500
<b>Variable Margin</b>	<b>\$22,500</b>	<b>\$ 7,500</b>
Constraint Hours	10	10
Constraint Mark-up	\$909/Hr	\$909/Hr
<b>Constraint Margin</b>	<b>\$9,090</b>	<b>\$9,090</b>
Additional Price to Achieve Constraint Margin	\$0	\$1,590
Minimum Price to Increase Margin	\$37,500	\$13,590

### EXHIBIT 2 Lean Custom Product Pricing for Increasing Profit Dollars

Custom Order:	Example A	Example B
Material Content	\$15,000	\$5,000
Material Mark-up	1.0x	1.0x
Possible Price	\$15,000	\$5,000
<b>Variable Margin</b>	<b>\$0</b>	<b>\$0</b>
Constraint Hours	10	10
Constraint Mark-up	\$909/Hr	\$909/Hr
<b>Constraint Margin</b>	<b>\$9,090</b>	<b>\$9,090</b>
Additional Price to Achieve Constraint Margin	\$9,090	\$9,090
Minimum Price to Increase Margin	\$24,090	\$14,090

that the company wants to price the custom product so that it will add to both the profit of the organization and the profit margin percentage of the organization.

#### The lean custom product pricing model

First, borrowing from Eli Goldratt's Theory of Constraints, identify the single constraint for the company for the product. When implementing a system based on lean principles, be aware that the constraint may no longer be found in manufacturing—it might

be found in customer engineering or project management (especially for a company offering custom products).

For demonstration purposes, assume the constraint is a machine in the factory. Next, establish the baseline relationships for the business. Calculate the current relationship of material expense to sales dollars. If sales is \$10M, and material expense is \$4M, the relationship is 2.5x or  $\$10M/\$4M$ , or the *material mark-up*.

Now, calculate the current relationship of the constraint. Identify the number of hours

of current constraint utilization. For instance, if the constraint is currently utilized 22 hours a day, six days a week, for 50 weeks a year, then the total constraint availability is 6600 hours. Next, identify the company's total variable margin. The variable margin is calculated by taking *sales* less *directly variable costs*, which typically only include material and variable sales discounts or compensation. Last, calculate the variable margin dollars per constraint availability. Using the example above for materials, sales of \$10M less materials of \$4M equals \$6M variable margin, divided by 6600 hours. The relationship is \$909 dollars per constraint hour, or the *constraint mark-up*.

This model is even more effective when a company has products that do not utilize the constraint and it is possible to remove those products from the variable margin calculation. This is especially true if the products that use the constraint have a higher than average variable margin. If they have a lower than average variable margin, it would not be necessary to remove them to calculate the organization's constraint mark-up.

We are now ready to price a custom product in a way that will increase our profit and increase our profit margin. First, identify the material in the custom product and apply the markup. Then, identify the constraint hours required by the product and apply that markup. The minimum accept-

able price would be the price that is at least as high as the price from the material mark-up that has a variable margin greater than the constraint mark-up margin. This will be the minimum price that will allow both the bottom line profit and the profit margin to increase (see Exhibit 1).

A variation on the model identifies the price for a product where the company cares only about increasing profit dollars, not margin percentage. Assuming only one restraint where all other resources are not variable, use the same approach without the material mark-up. Exhibit 2 shows the price calculation. In this case, though the calculation shows an incremental profit, it only replaces the margin of an existing constraint hour.

In closing, remember to set prices based on market dynamics, not cost dynamics. Pricing from a cost basis is risky and may not provide a competitive edge in the market. The practice either "leaves money on the table" because the product provides greater value to the customer, or it results in lost sales from pricing above market. Standard cost-based prices are flawed by the very nature of the systems that attempt to generate them. When market value is difficult to assess, understanding the true constraints and variable costs helps people understand what it costs to produce products allowing companies to compete and improve output. ■