

# Spotlight

## Profit Scaling Curves

### What is a Profit Scaling Curve?

Profit Scaling Curves show the relationship between sales of a given group of products and profitability based on their complexity profiles. They predict how increasing/decreasing revenue will impact operating margin, in other words, they reveal the opportunity for scale in a given segment. The curves themselves are plotted as operating margin against revenue and can be built for individual SKUs or any identifiable sub-group of SKUs (brand, product segment, plants, etc). Using our proprietary Square Root Costing analyses as a starting point, WP&C uses our understanding of a firm's existing costs, cost drivers and complexity to accurately project the influence of changing sales on the profitability of SKUs or sub-groups of SKUs. Movement along an existing Profit Scaling Curve represents growing/shrinking sales while maintaining current levels of complexity. Changing levels of complexity will drive shifts of the curves themselves.

Figure 1 is taken from work WP&C did with a large agricultural company. The product groupings represented by Segments 1 and 2 are profitable and stable - increasing or decreasing sales will have minimal impact on margin. Segment 3 is unprofitable, but there are significant scale advantages to be gained by increasing sales. However, while Segment 4 is unprofitable and no amount of sales growth will lead to profitability under current complexity conditions.

### Why are Profit Scaling Curves Important?

Most costing work, whether it be activity-based costing or standard costing, is a backward-looking snapshot of a firm's cost position. Square root costing and the associated Profit Scaling Curves are forward-looking and equip management with the information necessary to make profit-maximizing decisions. Understanding the position of a product segment on its Profit Scaling Curve provides several key pieces of information important in making those decisions:

- Is the SKU currently profitable and, if it is not, is it possible to grow its sales to profitability? Moreover, just how much growth is necessary?
- Is there still scale advantage (increased margin) to be had by growing sales of profitable SKUs?
- What level of cost reduction would be necessary to achieve profitability?
- What is the profitability relationship between segments/SKUs?
- What SKUs should be Grown, Maintained or Transformed/Eliminated?

Profit Scaling Curves help management answer the age old question - is a SKU or segment unprofitable because it is low volume (which can be addressed with scale) or does the intrinsic complexity make it unprofitable?

### Example of How Profit Scaling Curves are Used

Using Profit Scaling Curves with an agricultural client allowed WP&C to quickly determine that a particular product segment in one of its plants was not only unprofitable, but no amount of growth would lead to profitability. The company reduced complexity, and overall plant costs, by eliminating that product segment. They then focused on growing another product segment WP&C identified as being able to benefit significantly from additional scale. In fact, the magnitude of margin improvement the plant ultimately achieved matched the WP&C analysis exactly.

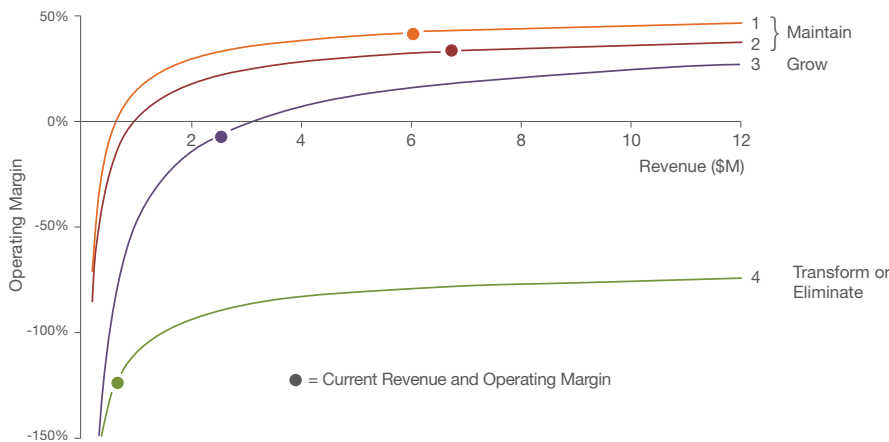


Figure 1. Profit Scaling Curves