

Production Economics Simplified.

The Benefits of the GSL LP Model

The simple question to be asked when making any investment is whether the future return is worth the price being paid today. This implies that not all benefit may be of a monetary nature, but if a business is to survive, the luxury of not making profit at some time is not a sustainable option.

Any such calculation about profit must focus on the marginal yield rather than the average yield from an additional input when maximum profit is the objective.

Average yield calculations obscure the true effect on total profit because each extra unit is assumed to be returning the same as all those that have been used before.

This is not the case. Most systems exhibit initially high marginal responses to additional inputs but subsequently responses decrease until reaching a point where no additional or a negative response is achieved.

Technological relationships define the shape of this response curve which in turn defines the resources required for each specific level of production. This “production function” need not be symmetrical and is invariably multidimensional. This inhibits the ability to either visualize or easily calculate how best to use resources, yet these relationships are the basis for the quantitative approach needed for any resource allocation problem.

GSL has designed techniques that allow fusion of the identification and description of available resources with a technique that allows analysis of optimal resource allocation to provide a single profit figure. A report function provides interpretation of this quantitative analysis to provide information for resource allocation decisions, crucial for any successful business.

In profitable systems, substitution of inputs occurs until all yields equate the same marginal return (equimarginality). Changing one input therefore results in a ripple effect of change throughout that specified system with marginal yield driving the process.

Contrast this with any technique using average yields or benchmarking (that assume all other factors remain constant) and the result is inferior information for both management purposes and understanding.

To date, business has relied on this simplified approach in order to provide some insight for management but determining the extent and timing of change and subsequent effect on profit has not been possible.

Through a combination of identifying problems, defining appropriate production functions, describing them in a quantitative form then solving using an optimization technique, GSL has created a methodology that combines production economics with specific business systems to define best resource and profit outcomes. This approach is simplified by use of a new input technology and provides information crucial to any business in a timely and easily understood report function.

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