Plan Management Navigator
Analytics for Health Plan Administration

Healthcare Analysts

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SCALE AND ADAPTATION TO THE CORONAVIRUS MARKET

Introduction

More than 30 million people have filed claims for unemployment which may lead to declines in health plan membership and a shift in their product mixes. This *Plan Management Navigator* introduces a new tool, complementing an existing one, that may be helpful in your administrative cost management. The tool itself is found here on the Sherlock Company website.

Sherlock Support for Adaptation

Our previous *Plan Management Navigators* have identified individual health plan characteristics that can impact costs. These characteristics include industry segment, product mix and economies of scale.

For instance, our Calculator application, provided here on our website, allows you to calculate cost norms for your plan considering the effects of industry segment (e.g., Blue Cross Blue Shield, Independent / Provider-Sponsored plans) and product mix. We described the use of the Calculator in our Mid-April *Plan Management Navigator*.

In February, we published in *Navigator* a summary of our studies of economies of scale study, with more detail in *PULSE*.

Because of federal, state and local government's restrictions on business activity to prevent the spread of the coronavirus, health plans bear a risk of cost disruptions due to the change in the levels and mix of membership. This *Navigator* introduces a tool to estimate the effects of scale on cost norms, and complements earlier analyses.

Use of the Application

The scale application is based on the Sherlock Company scale studies noted previously. It is found here.

To use the scale application, first populate the rate of change in your membership. Then place a value for which ever cluster of functions on you wish to estimate the effect of a change in scale. The cost value after the effect of scale will be shown.

For instance, assume that a health plan expects to decline by 10%. Also assume its Corporate Services costs are $5.92 PMPM, the same as the median value for Blue Cross Blue Shield Plans. After selecting the Blue universe, the indicated expected cost would be $6.03 PMPM.

Parameters of Application of Scale Studies

Economies of scale occur when unit costs decline as volume increases. Similarly, unit costs increase as volumes shrink. Economies of scale occur if a mix of fixed and variable costs are required to produce those units. For health plans, Member Services has costs that are largely variable over the intermediate term while they are more fixed in Actuarial. As membership declines, those fewer members bear a greater amount of the shared fixed costs. Sherlock Company scale studies measure this effect, and this analysis will help you apply them.

This analysis differs from the Calculator analysis an important respect; the basis for it is *inferred* from the actual experience of health plans but is not their actual experience. The Calculator analysis applies actual health plan values, such as median costs PMPMs for your universe. But since no health plan can be at multiple sizes at the same time, the scale studies are inferences drawn from many similar plans at a point in time. The resulting cost models are thus abstract from any plan's results or all plans' results.

Put a different way, as published in *PULSE* in February 2020, only approximately 10% of the function regression lines can explain more than 50% of the differences between the various scale and function costs. But the median value for Member Services is exactly that. For example, in Blue Cross Blue Shield Provider Contracting, the R^2 is 67.4%, meaning that there is about 32.6% not explained by the regression analysis. (The R^2 varies between the functions from 0.003% to 86.2%.) This means that cost advantages or disadvantages have varying levels of correlation to membership levels. Even in the functional area that has the highest R^2, there is still residual factors not explained by membership. We post the R^2 and p-values for the various expense clusters and universes on the application on our website.

There is an important implication in the use of these scale models. We have long held that there are few examples of economies of scale in health plans and that, generally speaking, the slopes of the scale slopes are gradual. Based on this and the previous paragraphs, the scale models should be applied recognizing their limitations, especially if the results are not highlighted as statistically significant. For instance, membership declines could translate into higher PMPM costs in accordance with the scale slopes. This can inform the effect of changes in membership, otherwise explained by the mix adjustment. But since factors other than scale can predominate, the results should be considered an input rather than conclusion.

Summary of The Math Behind The Model

The math behind this approach is adapted from information employed in the Boston Consulting Group (BCG) slope. The BCG Slope is the Boston Consulting Group's helpful and intuitive way of illustrating economies of scale. It expresses scale as the effect of doubling membership on unit costs, expressed as a percent of the initial costs.

The idea behind economies of scale is that costs are a mix of fixed and variable costs. A plot of total costs, with fixed and variable components, under different volume scenarios, is a downward sloping curve. Straight lines are more intuitive for us to model than curves. So we express both variables as logarithms and they plot at approximately straight lines.

Additional detail behind the model is abstract but, if you are interested, we can provide a simplified demonstration of how this works upon request.

For *PULSE* subscribers, a more detailed function by function analysis is available. A subscription to *PULSE* costs $395. Let us know if this is of interest.

Contact

Please do not hesitate to contact us with questions concerning this analysis, *PULSE*, the *Sherlock Benchmarks* on which it is based or your interest in licensing. We can be reached at sherlock@sherlockco.com or (215) 628-2289.

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