

Plan Management Navigator

Analytics for Health Plan Administration



Healthcare Analysts

Douglas B. Sherlock, CFA
sherlock@sherlockco.com

Christopher E. de Garay
cgaray@sherlockco.com

Erin Ottolini
erin.ottolini@sherlockco.com

John Park, CFA
jpark@sherlockco.com

Andrew L. Sherlock
asherlock@sherlockco.com

(215) 628-2289

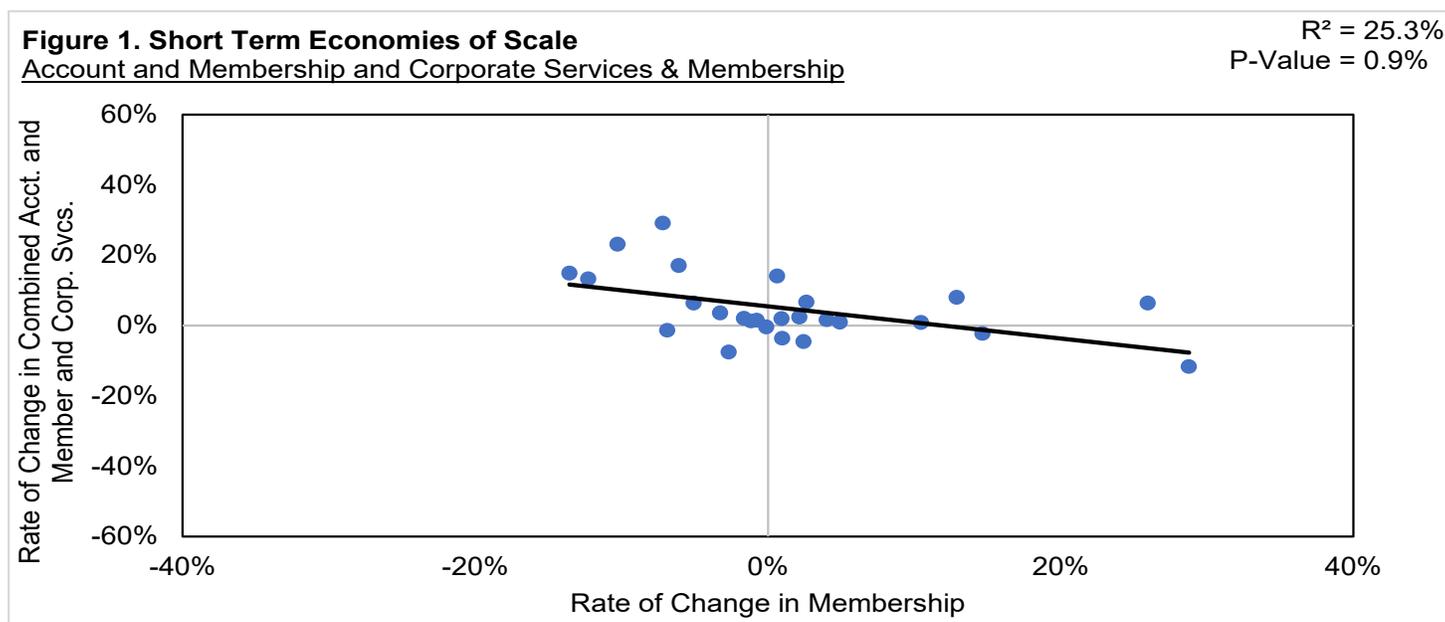
APPARENT ECONOMIES OF SCALE: SHORT TERM MEMBERSHIP CHANGES AND HEALTH PLAN ADMINISTRATIVE COSTS

Sherlock Company's view that economies of scale are of limited importance to health plans may seem counterintuitive to organizations that suddenly experience great changes in membership. Comporting with conventional intuition, this edition of *Plan Management Navigator* illustrates that short term swings in volumes lead to significant cost increases or decreases in a single year period.

Background

For many years, Sherlock Company has calculated the presence of economies of scale. Past editions of *Plan Management Navigators* summarize them, and past *PULSE* editions provide even greater detail. These analyses are calculated based on volumes and costs of numerous plans at a single point in time so, collectively, represent a long-term view. The health plans studied for these relationships ranged from 100,000 to millions of members so these relationships are largely free of the bias of high start-up costs.

The conclusion of these studies is typically similar to that of last year in which 31.6% of costs were subject to economies of scale. The activities that were subject to economies of scale had a scale slope of 89.7%. Thus, a health plan that operated with PMPM costs of \$50.00, might have \$15.80 subject to economies of scale, so that a doubling of the size of the health plan would reduce costs by \$1.63 PMPM or by 3.3% of the total administrative PMPM.



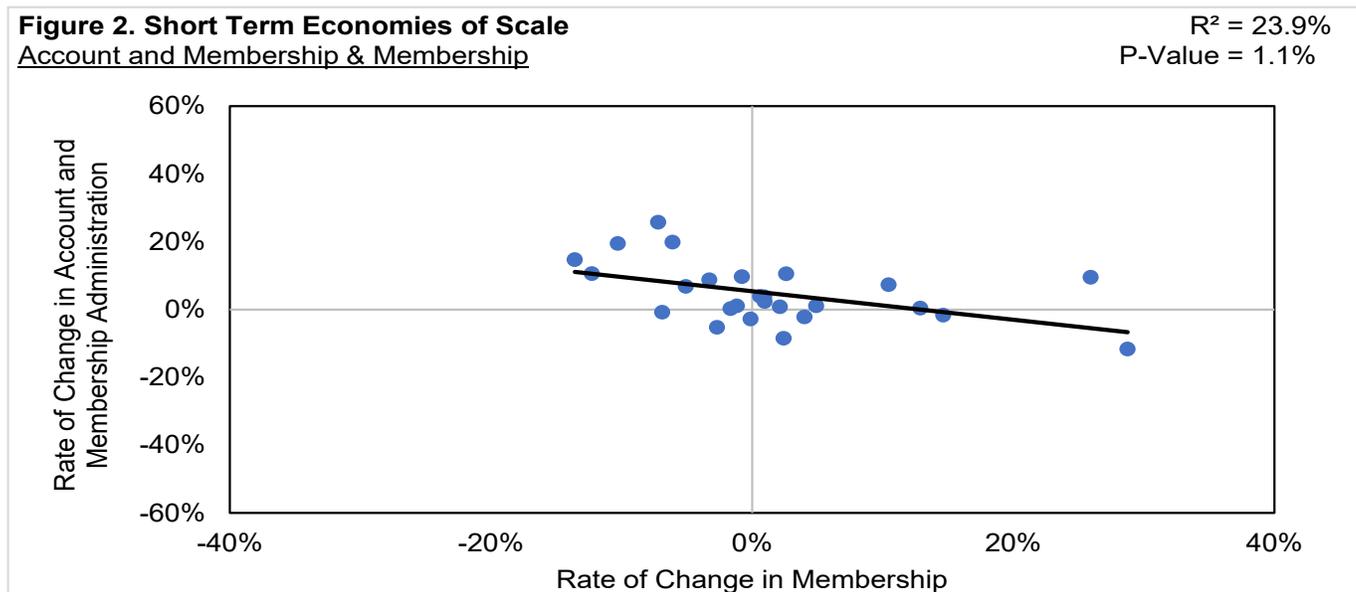
Staffing tends to be more subject to economies of scale. 54.0% of the staff is subject to economies of scale, and a doubling of the size of the health plan could lead to a staff at 89.5% of their pre-doubling value. If a plan operates at 18 FTEs per 10,000 members, a doubling of scale could lead to a decline of 1 FTE for every 10,000 members or by 5.7%. We have found that higher costs per FTE, including staffing costs, partially offsets staffing ratio reduction's impact on cost.

The result of these scale studies are summarized [here](#). Analyses of economies of scale for each function is found in *PULSE*. Subscription information is found [here](#).

There is an important implication of these analyses in that economies of scale imply the existence of fixed costs. If economies of scale exist, then fixed costs must also exist. The fact that, over the long term, economies of scale are limited means fixed costs are also limited.

The Effects of Scale in the Short Term

That economies of scale are limited in the long term doesn't mean that cost stickiness cannot affect costs in ways that mimic the presence of fixed costs and economies of scale. That is because it takes time for health plans to adapt to changing membership volumes. If membership declines, staffing remains until normal attrition and forced reductions occur. Growth has a similar effect in that managements may be conservative in building capacity given that growth projections are always speculative.



The Corporate Services Cluster also shows a relationship between membership growth and cost trends. Shown in Figure 3, the P-Value is 6.3% and the R² is 13.7%. Both the relationship and the explanatory power of the relationship is weaker than for the Account and Membership Administration. However, using the 5% threshold for significance (we tend to use 10% in our scale studies), the relationship for this cluster would not be significant.

The Corporate Services Cluster is composed of the functions of Finance and Accounting, Actuarial, the *function* of Corporate Services, Corporate Executive and Governance and Association Dues and License Fees.

Only the Corporate Services function relationship between the trend in per member costs and membership is meaningful. It had a P-Value of 3.8% and an R² of 16.8%. This function contains numerous sub-functions: Human Resources, Legal, Facilities, Audit, Purchasing and Mailroom, Risk Management and Other. (This last sub-function is not a miscellaneous catch-all: it is specific and includes medical records storage and depreciation of surplus equipment.)

The other functions' P-Values ranged from 27% to 90%. The combination of the significant relationship between membership growth and trends in per member costs for the Corporate Services function and that this function is the largest function in its cluster appears to power the trend in the cluster as a whole.

Returning to Figure 1, the relationship between the trends in the **combined costs of Account and Membership Administration and Corporate Services Cluster** is stronger than either of them individually. The P-Value is 0.9% and the R² is 25.3%.

How We Performed this Study

We included 26 plans in the analyses in this *Navigator*. These Independent/Provider-Sponsored and Blue Cross Blue Shield plans participated in the Sherlock Benchmarks during both 2016 and 2017 cycles. We excluded one otherwise eligible plan that underwent a significant reorganization and was therefore a conspicuous outlier.

Unlike most of our economies of scale studies, we did not adjust to eliminate the effect of product mix differences between the years. Normally, we think product mix considerations are very important and so this decision was a nod to simplicity.

Note

We hope that you won't hesitate to reach out to us concerning this article. Also, we will be updating our economies of scale study in coming weeks.