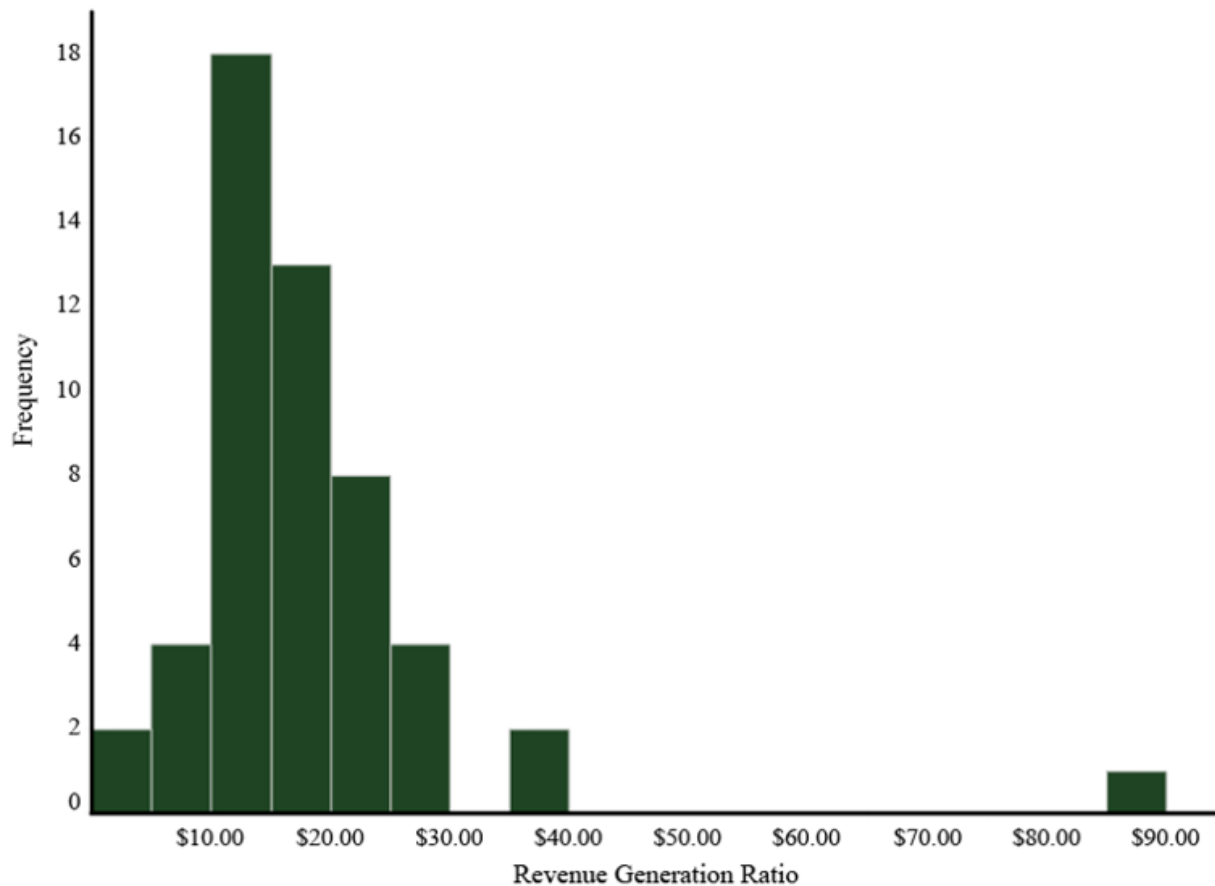


Appendix I: Revenue Generation

In order to examine potential opportunities for ESCs to maximize service provisions and generate revenue, independent of the regional and demographics characteristic of its customer base, we analyzed the revenue generation of all ESCs. Although larger ESC student member population bases provide an inherent ability to generate more revenues (due to higher state and local per pupil funding), we developed a ratio to examine revenue generation in relation to direct public funding in an effort to determine if an ESC’s population base limits its ability to generate revenue through indirect public funding (fees for service). This ratio, revenue generation ratio, shows the revenue generated from services provided relative to the direct public funding received from state and local subsidies.

Using a histogram for analysis enables an examination of the shape and spread of data using bars to show the frequency of data points within each interval.

Revenue Generation Ratio

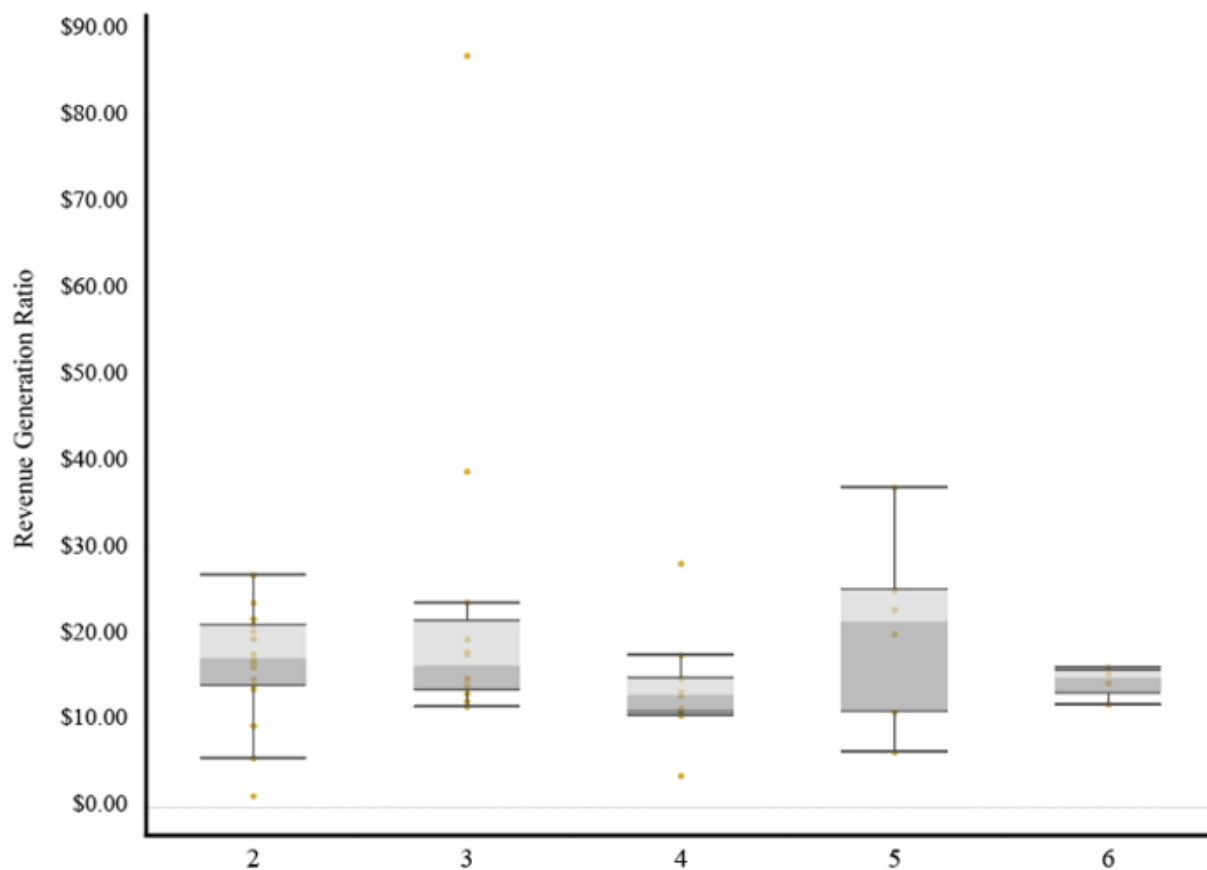


Source: ESCs

The average ESC generated an additional \$18.22 for every dollar of direct public funding, meaning that for each \$1.00 in direct public funding, the average ESC created an additional \$18.22 of revenue. Overall, 18 ESCs had revenue generation ratios that were between \$10.00 and \$15.00 as witnessed by the peak bar value in this range in the histogram above.

Revenue generation ratios were also analyzed by group in order to identify any outstanding ESC group(s) and to identify outliers in relation to their groups. Below is a boxplot of this analysis. Boxplots are a common explanatory data analysis technique that shows shape, central values, and variability of group data sets.

Revenue Generation Ratio by Group



Source: ESCs

Note: The IQR box represents the middle 50 percent of the data and the median is represented by the line contained in each box. The whiskers extend from either side of the box and represent the ranges for the upper and lower quartile of the data values, excluding outliers. Outliers are represented by the points included above and below the boxplots.

Group 5 had the highest median revenue generation ratio. Specifically, the Group 5 median revenue generation ratio of \$21.52 was 24.5 percent higher than the next highest group, Group 2, which had a median revenue generation ratio of \$17.29. This signifies that the typical Group 5 ESC is generating more revenue per direct public funding dollar than the typical ESC in the other

groups. In addition, Group 5 and Group 2 having higher revenue generation ratios than the remaining three groups dispels the assumption that ESCs with higher member district student population have the inherent ability to generate higher relative revenues.

Outliers are statistically identified values determined from the quartiles of the data set. The interquartile range (IQR) represents the middle 50 percent of the data points (equal to the data set between the 75th and 25th percentiles). Outliers are any value that falls outside of 1.5 times the IQR. In examining the revenue generation ratio, outliers were identified in both the network wide analysis as well as the group analysis. We examined the outliers in more in-depth to determine if ESCs with these resulting values differ methodologically.

A separate statistical analysis identified three outliers when examining the revenue generation ratios of all 52 ESCs and five outliers when examining the revenue generation by group. We first attempted to evaluate the financial data of each respective outlier in detail to see if we could identify potential areas or specific practices in place that may be contributing to the ability to generate greater revenue in relation to the direct funding received. We were unable to examine the revenue generated from specific service offerings or from specific customers using strictly the financial data, due to the lack of detail in the way revenue is recorded (see **Section 1**). Therefore, we scheduled follow up interviews with ESCs identified as outliers to discuss and gather information in regard to the results of this analysis. While these conversations yielded information identifying specialized or unique programs that have generated significant revenue for some ESCs, there were multiple mentions of reporting discrepancies that may have resulted in skewing the analysis. The outcomes of these follow up meetings identified the following potential causes:

- One outlier identified that revenues and expenditures cross over multiple years, which potentially inflated the revenue in the year of this analysis. Another indicated that member districts owed money that wasn't paid until the following fiscal year, deflating the revenue in the year of this analysis.
- One outlier identified that during the fiscal year used in the analysis, the revenue from a council of government (COG) flowed through its General Fund, skewing the analysis.
- One outlier with a significantly lower revenue generation ratio uses an Internal Services Rotary Fund to account for the programs offered and payroll services, which is the bulk of their revenue. This fund was excluded from operating revenue significantly skewing its ratio.
- One outlier, the smallest ESC in the state, indicated that due to the small student population of their member districts, direct public funding was minimal and therefore less revenue needed to be generated from service provisions to achieve the same or greater additional revenue per dollar of direct public funding than an ESC with a larger student population.

In conclusion, lack of detail needed to identify revenue generation by service offered or by customer and the reporting discrepancies explained above resulted in the inability to identify specific opportunities for ESCs to generate revenue using this analysis. However, uniformity and transparency of data (**Section 1**) and the model used to calculate the direct public funding (**Section 2**) were identified as areas in which further review was warranted.