1. A study of 86 savings and loan associations in six northwestern states yielded the following cost function:20

C= 2.38 - .006153Q + .000005359Q2 + 19.2X1

(2.84) (2.37) (2.63) (2.69)

Where C- average operating expense ratio, expressed as a percentage and define as total operating expense ($ million) divided by total assests ($ million) times 100 percent

Q= output, measured by total assets ($ million)

X1= ratio of the number of branches to total assests ($ million)

Note: The number in parentheses below each coefficient is its respective t-statistic.

1. Which variable (s) is (are) statistically significant in explaining variations in the average operating expense ratio?
2. What type of cost-output relationship (e.g., linear quadratic, or cubic) is suggested by these statistical results?
3. Based on the results, what can we conclude about the existence of economies or diseconomies of scale in savings and loan associations in the Northwest?