Impact of an Increase in Economies of Scale on Market Areas
Law of Demand

Output Effect:
1. Increase in scale economies lowers Average Production Cost.
2. Since Average Total Cost (ATC) = Average Production Cost + Average Travel Costs, the decline in Average Production Cost also reduces ATC.
3. The decline in ATC will increase sales per store (q).

4. The increase in q will increase the market area since M = q/de.

5. Each store needs a larger market area to sell its additional output.

Demand Effect:
1. The increase in scale economies lowers Average Production Cost.
2. Since Average Total Cost (ATC) = Average Production Cost + Average Travel Cost, the decline in Average Production Cost reduces ATC.
3. Net Price = Store Price + Travel Costs. The decline in ATC will allow the firm to lower Store Price, and thus Net Price.
4. Each consumer will buy more CDs at the reduced Net Price, i.e., d increases.

5. The market area declines since d has increased and M = q/de

6. Each firm needs less space to sell a given output since each consumer buys more.

The impact on the market area depends on the net impact of the two effects. If demand is price elastic, it is more likely that the market area will decrease since the increase in d will be large relative to the increase in q. If demand is price inelastic, it is more likely that the market area will increase because the increase in d will be small relative to the increase in q.