

# **EXHIBIT 4**

# Microeconomics

PRINCIPLES, APPLICATIONS, AND TOOLS

6TH EDITION

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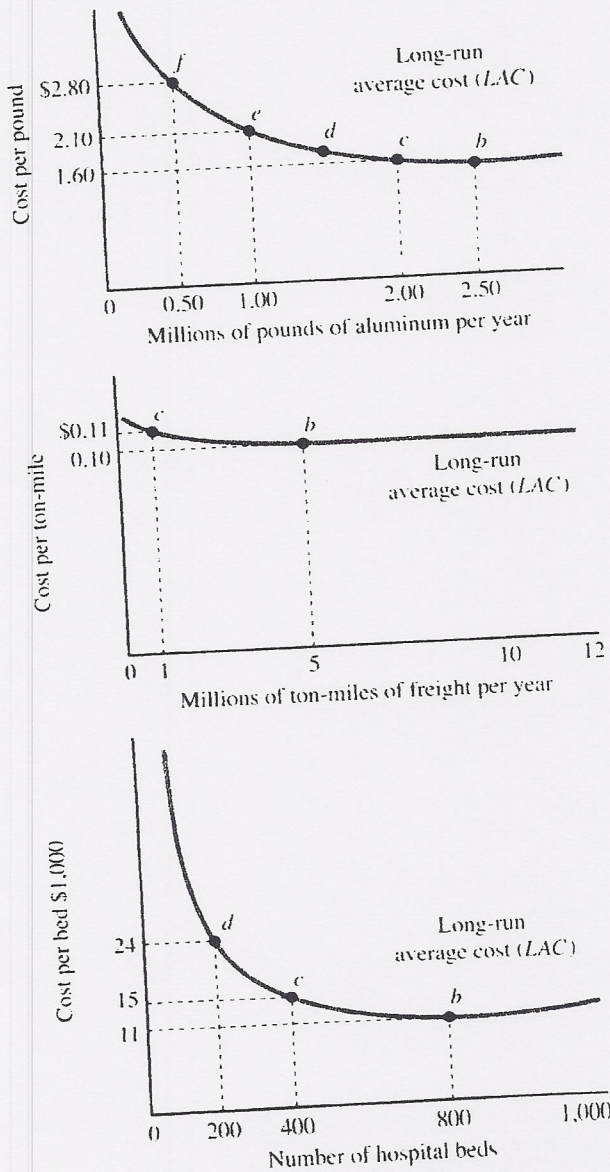
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capital. In Figure 8.5 on page 189, point *a* shows that the average cost of 5 paddles per day exceeds the average cost for larger quantities.

### Scaling Down and Labor Specialization

A second possible reason for higher average long-run costs in a smaller operation is that labor will be less specialized in the small operation. As we saw earlier in the chapter, labor specialization—each worker specializing in an individual production task—makes workers more productive because of continuity and repetition. Reversing this process, when we reduce the workforce each worker will become less specialized, performing a wider variety of production tasks. The loss of specialization will decrease labor productivity, leading to higher average cost.

To see the role of labor specialization, consider the first row of numbers in the table in Figure 8.6. To produce one paddle per day, the firm needs a full day of work by one worker. The single worker performs all production tasks and is less productive than the specialized workers in larger operations. This is one reason for the relatively high average cost in a one-paddle operation (\$150). The second reason is that the cost of the indivisible input is spread over fewer paddles.



◀ **FIGURE 8.6**  
Actual Long-Run Average-Cost Curves for Aluminum, Truck Freight, and Hospital Services