

1. Constant service times eliminate one of the two key sources of variability in the queuing model, the other being time between arrivals. As a result, we should expect constant service times to result in improved performance, all things being equal. As an example, suppose you arrive at the bank with three people ahead of you. If the service time is a constant 2 minutes, you know you will wait about 6 minutes (depending on how long the first person has been “in service”). On the other hand, if the service times vary, you could be in for a shorter, or much longer, time.
2. A supply chain where multiple manufacturers take turns processing a particular product suggests multiple phases. Hence, Figure 6S.3 best represents this environment.
3. All simulation modeling does is capture, in a convenient and easy-to-analyze manner, the environment one intends to model. If the decision-maker builds a model of a less-than-desirable environment—for example, one teller trying to service 100 customers an hour—then the simulation results will reflect that environment. That said, simulation models can help guide decision-makers to better solutions via “what if” analyses.