

smaller batch size leads, on average, to smaller queue size

1

noticeably *delayed* positive effect ... as batch size goes down and the group sees the inefficient overhead, they may improve and thus over time start to drive the overhead *down*

2

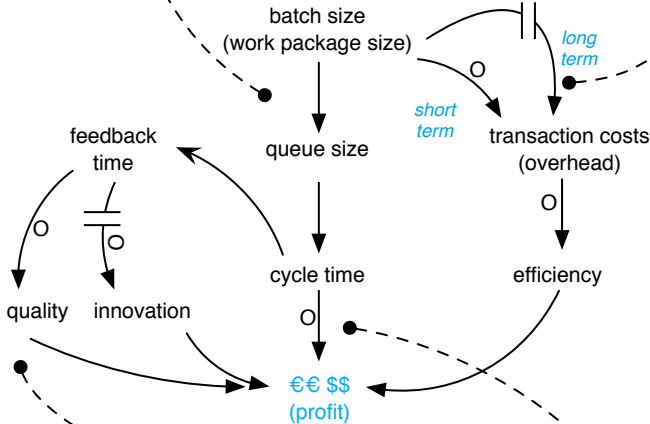
this is a key, and perhaps counterintuitive, relationship not first appreciated in lean development and queue management—to sustainably work in small batches and short cycles, there arises strong pressure to constantly improve or revolutionize; this leads to driving down transaction costs

however, there is a delay in this long-term improvement, and the short-term effect is the opposite—increasing overhead as batch size becomes smaller

in the long term, for example, people cannot stand inefficient manual testing in this context—they will move to automated test, but that takes time

this is the “lake and rocks” effect

3



other key, but not immediately appreciated, *opposite* reinforcement impacts of reduced feedback time...
- short feedback loops quickly improve quality
- after some delay, the increased innovation opportunities are exploited and can pay off

5

lower cycle time leads to higher profits (often); this is an opposite (O) effect

some product groups are unaware that shorter cycle time can have a *direct* impact on profit, in addition to the *indirect* benefits shown in this model

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