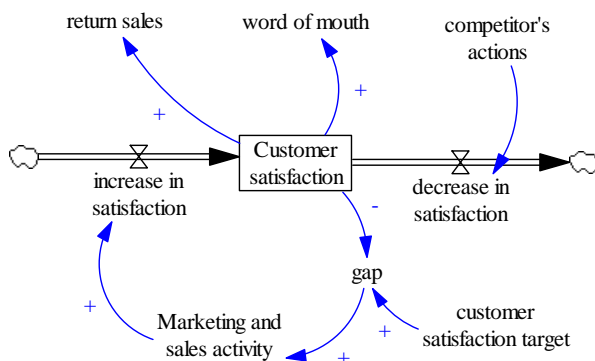


Why stocks matter

1. Stocks are the memory of a system and their rate of change creates inertia. Stocks are accumulations and they often only change very slowly. For example, a company that keeps



customers happy may be less affected by competition than a company with low customer satisfaction (a stock) levels. When customer satisfaction is high, it may take some time before competitor activity influences customer satisfaction.

Stocks are also the memory of a system. The current level of customer satisfaction depends on the past flows of increased satisfaction due to marketing and sales activity in the same way

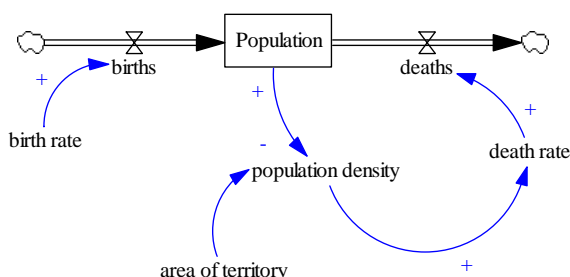
a bank balance “remembers” all of your past spending and savings activities. This is why opinions and reputations are so hard to change. They are both stocks, and stocks never forget.

2. Stocks characterize the state of the system and provide the basis for actions. The state of our health or that of the economy depends on levels of stocks. Stocks provide the basis for actions as we act to influence stock levels.

For example, if the number of orders (a stock) in a company falls below a critical level, then new sales actions must be undertaken to improve the situation of the company. If cash on hand (a stock) falls below a critical level, then a company will have to obtain financing from the bank or may decide to chase up unpaid bills to remain solvent.

3. Stocks decouple rates of flow and create delays. Stocks can act as buffers and allow for the decoupling of flows. For example, a stock of goods kept on shelves, or in a store-room or a warehouse allows the shop to decouple sales (outflows) from purchases (inflows). Decoupling flows can bring stability to a system but it can also create delays. For example, when you post a letter it is not delivered immediately. Instead, postal mail accumulates during a fixed period of time before it is grouped together and delivered by the postal service.

4. There are always consequences when a stock reaches a limit. There are always consequences when a stock reaches a limit. For example, there are consequences on productivity when staff levels are too high for a given office space or when the level of staff morale falls.



For example, as the population stock increases, so does the population density (ex. number of inhabitants per square kilometer). The greater the population density, the more stretched infrastructure becomes (ex. number of hospital beds per 1000 people) which may increase the death rate. Sometimes stocks reach a critical level that can have disproportionate consequences

elsewhere in the system. Such a level is called a “tipping point”.

References

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