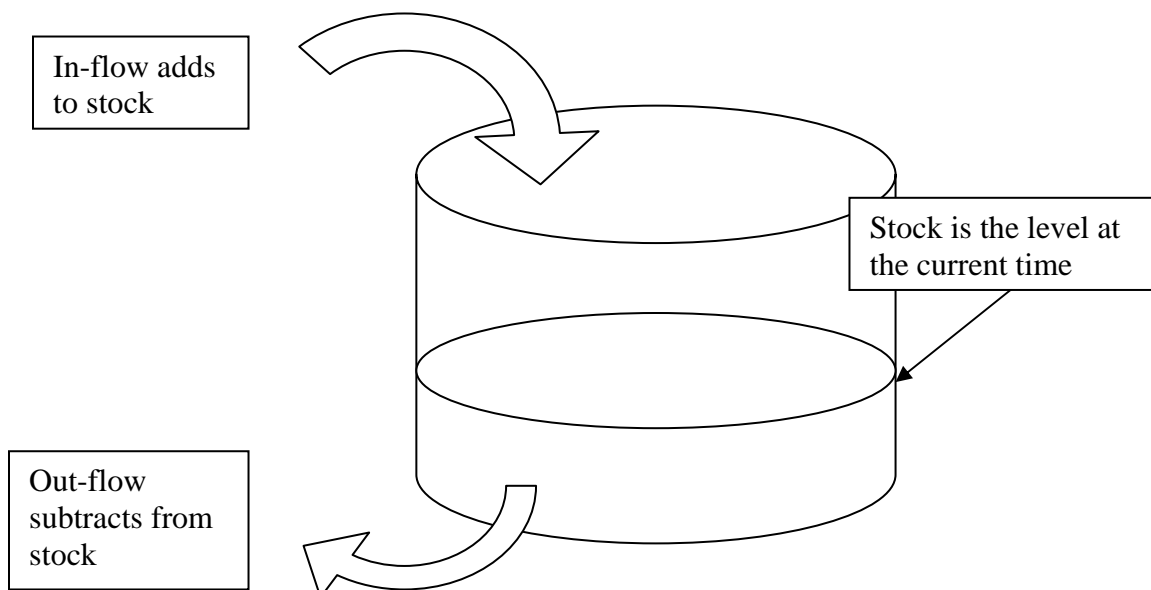


Stock and Flow

Stock and Flow are concepts used by economists and policy analysts (among others) to describe how things accumulate or decrease over time. They are also useful in thinking about how the mix of characteristics within a group is likely to change over time.

Stock is the level or amount of a particular thing in a particular time period. This is usually an outcome we are interested in: for example the March 1999 welfare caseload, the number of water customers in a particular month, or cash reserves on hand in July 2004. The important elements of a stock are that it is a well-defined and measured quantity, it is measured for a particular time period, and that it can change over time.

Flow is an addition to or subtraction from the stock. Flows can be additions such as clients newly on the welfare rolls in March 1999, water customers in newly occupied housing, or newly deposited cash. Flows can be subtractions such as clients who left welfare this month, water customers who dropped service, or cash that we spent. The important elements of a flow are: the direction (addition or subtraction), the time duration used for assessing the change (e.g., 1 month), and the size or rate of change during that duration (e.g., the number of clients entering or leaving welfare).



The Stock will change in a period if the in-flows and out-flows are not equal. Think about this with a sink analogy: the stock is the current water level in your sink, the in-flow is the amount of water flowing in per minute, and the out-flow is the amount of water draining out per minute. If the water is flowing in (in-flow) faster than it is draining (out-flow), then the water level will get higher (higher stock). Conversely, the

water level (stock) will fall if it is draining (out-flow) faster than the water is running in (in-flow). In our welfare caseload example, if more clients leave welfare this month than the number who entered, then the caseload will decrease.

Sometimes, we want to talk about the characteristics of the stock and how they might change as the in-flows and out-flows change. For example, we might want to identify the job-readiness of those entering (in-flow) and leaving welfare (out-flow) in order to assess the potential level of job-readiness of the current (stock) welfare clients and how this is likely to change over time.

If the in-flow and out-flow differ from each other in their characteristics, then the mix in the caseload will change over time. Another way to think about this is to divide the flows by characteristics (e.g., separate in and out flows of job-ready and non-job-ready clients). So, (with two in-flows and out-flows) if the ratio of the two kinds of in-flows differs from the ratio of the two kinds of out-flows, then the mix in the stock will change EVEN IF the level of stock stays the same (because in-flow=out-flow overall).

For example, the welfare caseload (stock) may stay the same in a month because the number of clients entering was equal to the number who left. However, if the clients entering were more likely to be non-job-ready than were the clients who left, then the caseload (stock) will have a larger share of non-job-ready clients at the end of the month.

