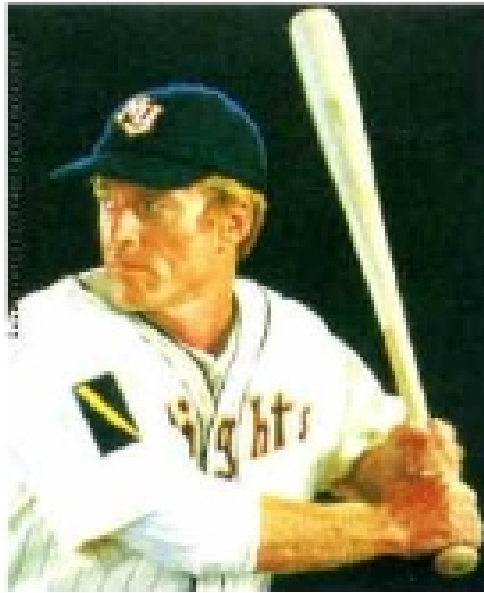


COST BEHAVIOR



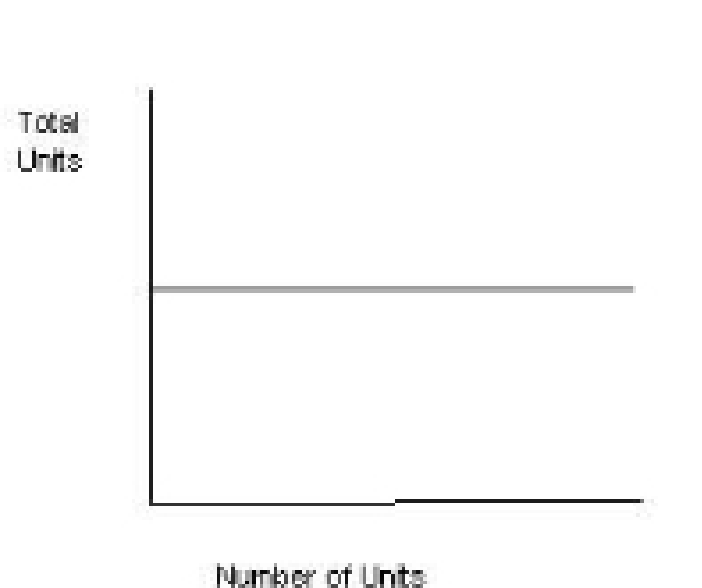
When dealing with costs, it helps for you to determine what “drives” the cost in question. A Cost Driver (also called Cost Base) is an activity that is associated with, or related to, changes in the cost in question. For example, assume that Redford, Inc. produces classic, wood baseball bats. The cost of the wood materials used in the production of these baseball bats is closely associated with the number of bats produced. In this case, the number of units is a good Cost Driver for the material cost in Redford’s production of bats. In fact, the number of units produced is often used as the Cost Driver for costs.

For purposes of this discussion, we will assume that the Cost Driver is the number of units produced, but Cost Drivers actually can be a number of different things. For example, the cost of custodial services is driven by the amount of floor space maintained. Thus, floor space is often used to allocate custodial costs between plant departments. Another popular Cost Driver is the number of labor hours that are used to make a product.

Variable Costs change as their associated Cost Drivers change. On the other hand, some costs do not change regardless of changes in production or other Cost Drivers. These costs are referred to as Fixed Costs.

Fixed Costs

A graphical depiction of a Fixed Cost is shown below. Regardless of the number of units produced (or changes in other typical Cost Drivers), the Fixed Cost remains unchanged.



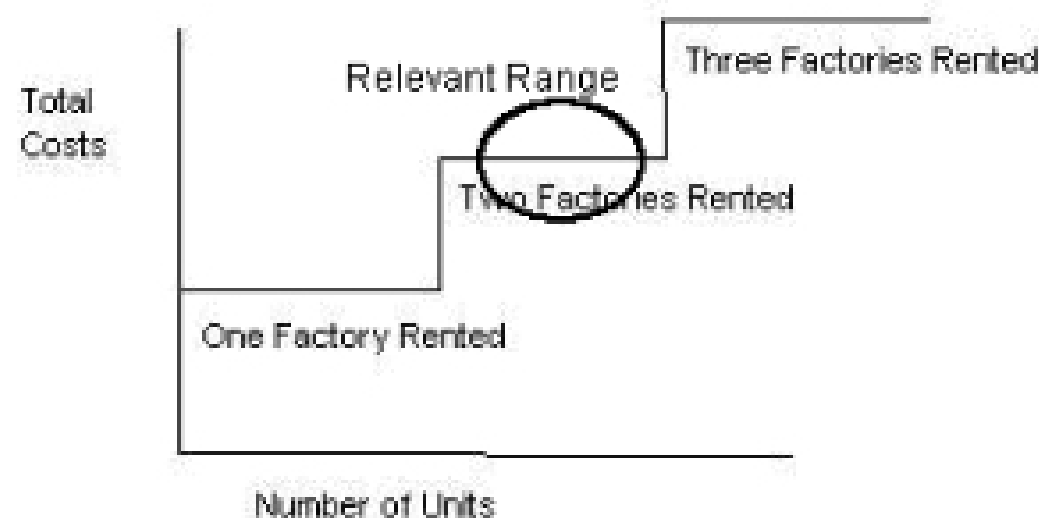
Graphical Representation of a Fixed Cost

This definition of Fixed Costs is possible because two assumptions have been made. First, the time horizon being discussed is relatively short. Second, the range of production in question is limited.

The time horizon is important. In making decisions, we typically assume a relatively short time horizon. For example, we might be considering a time horizon of one year. Over that year, our rent is likely to remain unchanged regardless of a change in the level of our production. Over a long enough time horizon, however, all costs become variable. For example, with a longer time horizon, our monthly rental expense is likely to increase due to the expiration of our lease, an expansion of our operations, and/or the need to increase and modernize our production capacity.

In addition to the time horizon, we also typically assume that we will be operating within a range of activity (Relevant Range). For example, assume that our baseball bat manufacturer normally produces and sells between 10,000 and 20,000 bats in a year, and it has the capacity to make up to 40,000 bats in its current facilities. In this case, it is unlikely that it will be called upon to make more than 40,000 bats, and it is unlikely that its Fixed Costs will change within this Relevant Range of production (10,000 – 20,000 bats).

Without the assumption regarding Relevant Range, the Fixed Cost function could become a step cost. It remains fixed for a given range of production (or other Cost Driver), but it eventually changes. A graphical depiction of the cost to rent a factory appears below:

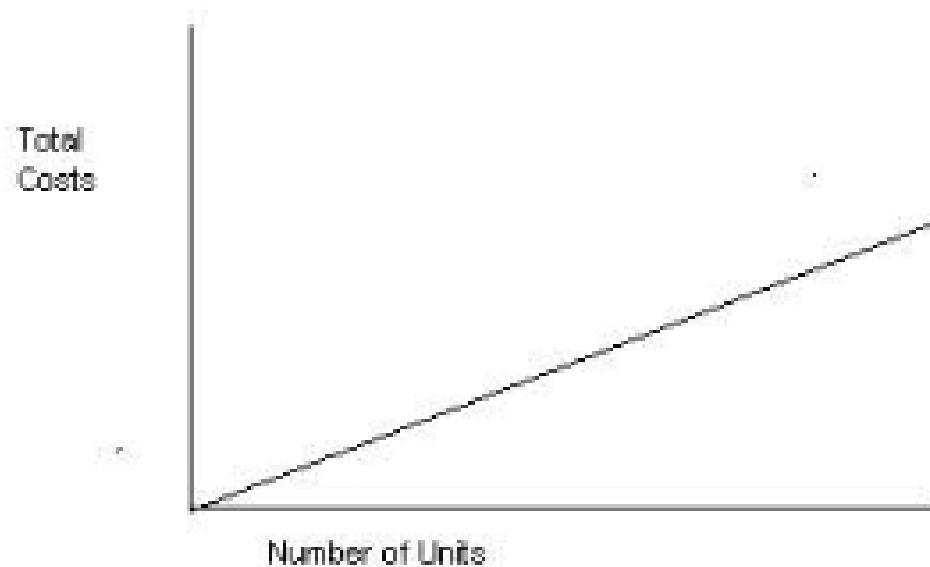


Graphical Representation of a Step Cost

As long as you assume that the Relevant Range of production (the circle) can be handled by two factories, then factory rent is a Fixed Cost.

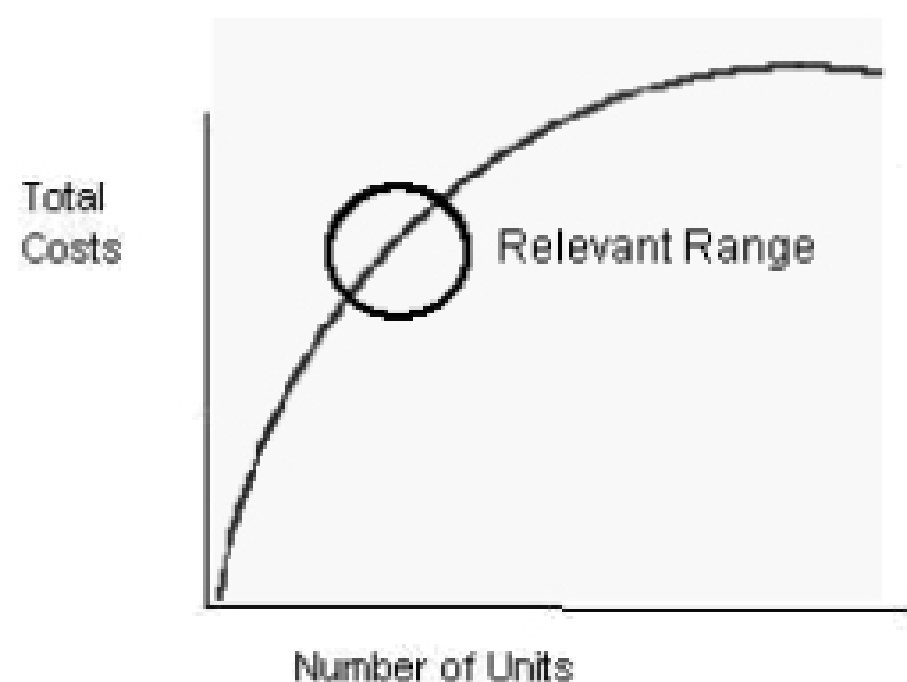
Variable Costs

As noted above, Variable Costs change with changes in their associated Cost Drivers. A graphical depiction of a Variable Cost appears below.



Graphical Representation of a Variable Cost

The linear representation of a Variable Cost with a constant slope is again an oversimplification of the behavior of Variable Costs. For example, the existence of Economies Of Scale would make a Variable Cost function appear more like the following:



Graphical Depiction of a Non-Linear Variable Cost

When only the Relevant Range is considered, the non-linear cost (within the circle) appears more linear. This fact makes the assumption that the Variable Cost function is linear becomes more realistic.