

# Dependent and independent demand in inventory management flashcard



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Inventory Management deals essentially with balancing the inventory levels. Inventory is categorized into two types based on the demand pattern, which creates the need for inventory. The two types of demand are Independent Demand and Dependent Demand for inventories. The choice of how to control inventory depends upon the fact of whether or not the demand of the items has a dependent or an independent character. This difference is important in selecting an adequate inventory management approach.

**Independent Demand** Independent demand exists where the rate of use for an item does not relate directly to the use of another item (for example, finished goods such as a computer). An inventory of an item is said to be falling into the category of independent demand when the demand for such an item is not dependent upon the demand for another item. Finished goods items, which are ordered by External Customers or manufactured for stock and sale, are called independent demand items. Independent demands for inventories are based on confirmed Customer orders, forecasts, estimates and past historical data.

The demand for cutting oil used by the machines on the line cannot be calculated accurately from the production schedule and bills of materials; thus, cutting oil is said to have an independent demand. **Dependent Demand** If the demand for inventory of an item is dependent upon another item, such demands are categorized as dependent demand. Raw materials and component inventories are dependent upon the demand for Finished Goods and hence can be called as Dependent demand inventories.

An item is said to exhibit dependent demand characteristics when its use is directly dependent on the scheduled production of a larger component or parent product of which the item is a part. Hence, in a plant producing automobile engines the demand for engine block casting is a dependent demand; once the production schedule for a group of engines is established, the planner knows with certainty that one block will be required for each engine. In some industries, dependent demand sometimes called program items.

Generally speaking, in an assembly or fabrication-type operation, most production inventory items will have a dependent demand, while MRO and similarly used items will have an independent demand. Take the example of a Car. The car as finished goods is an held produced and held in inventory as independent demand item, while the raw materials and components used in the manufacture of the Finished Goods – Car derives its demand from the demand for the Car and hence is characterized as dependent demand inventory.