

Push System Vs. Pull System Inventory Control

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An inventory manager must be able to develop an effective inventory control system to manage customer demand. The demand for the product will control inventory costs, carrying costs, ordering costs and storage costs. Inventory control systems are generally categorized as push or pull models. Knowing the definitions, advantages and disadvantages of each system will help a company establish which inventory control method works best for their organization.

Push System

The push system of inventory control involves forecasting inventory needs to meet customer demand. Companies must predict which products customers will purchase along with determining what quantity of goods will be purchased. The company will in turn produce enough product to meet the forecast demand and sell, or push, the goods to the consumer. Disadvantages of the push inventory control system are that forecasts are often inaccurate as sales can be unpredictable and vary from one year to the next. Another problem with push inventory control systems is that if too much product is left in inventory. This increases the company's costs for storing these goods. An advantage to the push system is that the company is fairly assured it will have enough product on hand to complete customer orders, preventing the inability to meet customer demand for the product. An example of a push system is Materials Requirements Planning, or MRP. MRP combines the calculations for financial, operations and logistics planning. It is a computer-based information system which controls scheduling and ordering. Its purpose is to make sure raw goods and materials needed for production are available when they are needed.

Pull System

The pull inventory control system begins with a customer's order. With this strategy, companies only make enough product to fulfill customer's orders. One advantage to the system is that there will be no excess of inventory that needs to be stored, thus reducing inventory levels and the cost of carrying and storing goods. However, one major disadvantage to the pull system is that it is highly possible to run into ordering dilemmas, such as a supplier not being able to get a shipment out on time. This leaves the company unable to fulfill the order and contributes to customer dissatisfaction. An example of a pull inventory control system is the just-in-time, or JIT system. The goal is to keep inventory levels to a minimum by only having enough inventory, not more or less, to meet customer demand. The JIT system eliminates waste by reducing the amount of storage space needed for inventory and the costs of storing goods.

Push-Pull System

Some companies have come up with a strategy they call the push-pull inventory control system, which combines the best of both the push and pull strategies. Push-pull is also known as lean inventory strategy. It demands a more accurate forecast of sales and adjusts inventory levels based upon actual sale of goods. The goal is stabilization of the supply chain and the reduction of product shortages which can cause customers to go elsewhere to make their purchases. With the push-pull inventory control system, planners use sophisticated systems to develop guidelines for addressing short - and long-term production needs.

Choosing the Right System

It is difficult for inventory managers to always know how much inventory to order and when. The type of inventory control system will depend in large part on what type of product is being produced. Some items, automobiles for instance, may not be able to be produced with the just-in-time or pull inventory control method. The production of large items, such as automobiles, is too complex and takes too long to only produce the amount needed to fulfill specific customer orders. Computer companies, such as Dell, are incorporating the push-pull system, where raw materials and goods are pre-ordered and stored, but the actual computer is not assembled until the customer makes an order.