

## Just in Time (JIT) Concept: A review paper

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**Abstract:** Just in Time (JIT) concept also known as no inventory concept which is a powerful tool in manufacturing industries. The concept signifies that raw material should enter in the industrial premises only when it is required. This directly cut down the inventory costs which can be further utilized for other useful means.

**Keywords:** JIT, Quality, Customer satisfaction

### 1. Introduction

The JIT concept was started long back by Toyota Industries in Japan. In 1970, Japanese people tried to eliminate inventories. JIT is one of the means of lean manufacturing (Virmani et. al., 2016, 2017, and 2018). The JIT concept is also called “Toyota Manufacturing System”. Schonberger (1983) explained the JIT system as to: "produce and deliver finished goods just in time to be sold, sub-assemblies just in time to be assembled into finished goods, and purchased materials just in time to be transformed into fabricated parts. Schonberger (1983) also classified the benefits of JIT into the following five groups:

- (1) Part cost—low scrap cost, low inventory cost.
- (2) Quality — fast detection and corrections, and higher quality of parts purchased.
- (3) Design—fast response to engineering change.
- (4) Administrative efficiency—fewer suppliers, minimal expediting and release papers, and simple communication and receiving.
- (5) Productivity—reduced rework, reduced inspection and reduced parts delay.

### 2. Literature Review

Monden (1981) explained JIT as manufacturing system which produces required amount of parts or products as and when demanded by the customers. Wilson pointed out that for the effective implementation of JIT, the suppliers are required to be located nearby manufacturing site. Jing-wen-li (2003), explained that JIT involves waste elimination, employee and supplier involvement and total quality control.

Manoochehri (1984) identifies problems arising from having multiple suppliers in a JIT system as follows:

- It is more difficult to manage the co-ordination of production schedules and relationships.
- Multiple suppliers incur increased costs arising from the provision of appropriate training of suppliers by the manufacturer.
- Because of the decreased volume of individual shipments if multiple suppliers are used, it is not possible to maintain the same service of delivery as is possible from a single supplier, without significantly increasing delivery costs.

### 3. Benefits of Implementing JIT

- a. Decreased or No Inventory cost
- b. Lesser space required for inventories i.e. less carrying cost
- c. Reduced blockage of capital
- d. Effective utilization of money
- e. Lesser handling of material/ reduced obsolescence
- f. Increased Profitability of firm
- g. Less need of capital required

### 4. Conclusion

It has been seen that successful implementation of JIT helps in reducing the inventories of minimum possible level. Inventories are also called necessary evil. Inventories cannot be eliminated completely but excess of inventories results in huge loss to industry. So, it is required to be kept at optimum level.

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