

Chapter 15: Operational Strategies: Lean Production

The effective management of time

Time-based management

- In some organisations, time is used as a selling point – the ability of the firm to respond to a customer request can give firms a competitive advantage.
- More specific applications of time-based management can be seen in the form of reduced lead times or shorter product development times.

Reduced lead times

- The lead time is the time taken between an order being received and the final product or service being delivered to or provided for the customer.
 - Critical path analysis (CPA) shows how, when all the areas involved in a project are planned together, the time taken to complete the project can be reduced.

Shorter product development times

- Constant changes in customer demands and the high failure rate of new products mean that companies which can produce new products quickly are able to stay competitive.
 - Continual market research enables firms to identify potential trends and so change their product range.
- Flexible production methods can also allow firms to modify their products quickly in response to the market.
 - IT has helped businesses to modify and adapt their processes very quickly.

Critical path analysis

Features of critical path analysis

- Nodes
- Activities
- Duration
- Prerequisite
- Dummies

Float times

- The float times can be derived from the network.

Constructing a critical path network from descriptive information

- In real life, managers will not be given a table of activities with their prerequisites neatly defined.
 - The first step in compiling a real network is to work out the logic behind the project in order to identify sequences of events.

Benefits of critical path analysis

- Allows a business to improve the efficiency of its resources.
- Lets a business know precisely when activities are scheduled to take place.
- Business can use CPA to investigate changes in resources or sequencing that would improve efficiency if necessary.
- Can be used to help control and review.
- Forces managers to engage in detailed planning which helps the business to reduce the risk of delays.
- Relationships with customers can be improved.
- Can be used to calculate the likely impact of any delays that are unavoidable.