

# Decision making in manufacturing organization related to make or buy scenarios.

[Business](#), [Management](#)



## INTRODUCTION

Manufacturing Organization in Today's world is constantly facing the challenges of making strategic decisions that affect the sustainability and profitability of the manufacturing Organization.

This study will be exploring the aspects of decision making within a manufacturing Organisation as it relates to make or buy scenarios.

In order for these decisions to be made an understanding of the decision making process is needed.

### **Decision Making:**

This involves the processes resulting to a selection of a course of action among several alternatives.(1)

To a great extent, the success or failure of companies greatly depends on the quality of their decisions.

### **Decision making Theory:**

This is a general approach to decision making when the outcomes associated with alternatives are often in doubt.

It follows a process of

1. Listing the feasible alternatives.

One alternative that should be always considered as a basis for reference is to do nothing.

2. List the events. (Also called chance events or states of nature) that have an impact on the outcome of the choice but not under the decision maker`s control

3. Calculate the payoff for each alternative in each event

The payoff is the total profit or total cost These payoffs can be entered into a payoff table, which shows the amount for each alternative if each possible event occurs..

4. Estimate the likelihood of each event using past data, executive opinion or other forecasting methods.

This is expressed as a probability, making sure that the probabilities sum to 1. 0

5. Selecting a decision rule to evaluate the alternatives, such as choosing the alternative with the lowest expected cost. This depends on the amount of information the decision maker has on the events probabilities and the decision maker`s attitude towards risk

The types of decision people make depend on how much knowledge or information they have about the situation. (2)

Decision making can be examined under three different situations.

1. Decision making under uncertainty. (Events can be listed but their probability cannot be estimated).

2. Decision making under risk. (Events can be listed and their probability estimated).

3. Decision making under certainty. (A situation where the outcomes are known)

Buy or Make decisions are increasingly common as companies, in their efforts to improve efficiency and competitiveness, focus on their core activity which they do best, and contract out peripheral activities.(3)

Make or buy decisions rarely depend solely on cost factors. Other factors need to be considered: e. g.

Continuity of supplies

Retaining skilled labour

Employing specialist plant

The availability of capital to make and the alternative uses for such capital etc.

Each company therefore engaged in manufacture may have to review periodically

the extent to which it will:

a) Make or buy plant, equipment or components

b) Process internally or buy out semi-finished components and materials

Decisions may result from changes in the company or market situation.

Some firms pursue a policy of specialisation and concentrate their production effort on a fairly narrow front and thus buy out a wide range of commodities.

Other companies, however, tend to exercise greater control over the manufacture of equipment, components and the processing of semi-finished materials, minimising the number of the various items bought out.

## **LITERATURE REVIEW**

### **Make or Buy Decisions**

a)MACRO - Decisions involve long-term capital expenditure relating usually to products and materials as in questions of vertical integration requiring the determination of policy by senior management e. g. the decision by a print manufacturer to acquire a printing press.

b)MICRO - Decisions, which normally relate to buyers e. g. new parts i. e. should these be made or bought in etc.

### **Make or Buy Categories**

Make or buy decisions may apply in four different situations:

a)Items currently made in - consideration being given to buying out.

b)Items currently bought out - consideration being given to making in.

C) Items currently part made in - consideration being given to placing all the work internally or externally.

d) Items for a new requirement – consideration being given to making in or buying out in total or in part.

### **Initiation of Make or Buy Studies**

Make or buy studies may be initiated by Purchasing or by other departments resulting from:

- a) Large price increases being submitted by suppliers
- b) Space needed for other more lucrative production commitments
- c) Production rationalisation plans
- d) Comparative price studies (Value Analysis or ABC analysis).

### **Long-term/Short-term Considerations**

Make or buy decisions may relate to long-term or short-term needs (i. e. can it be planned or

emergency situations?).(5). The extent to which efforts are deployed will depend on value,

importance and time-scale. Take the case of a company requiring a minor spare urgently.

The part is normally made in but because of a machine breakdown

Purchasing is asked to

buy out. Obviously, in such a situation an in-depth study will not be mounted involving

Finance, Product Development, Market Research etc.

### **Financial/Non-Financial Classification**

Make or buy studies can be classified as being:

- a) financial – i. e. they are done on a strictly cost comparison basis
- b) non-financial – i. e. they are done because of other constraints which will, obviously, have an ultimate financial impact (e. g. secrecy, lack of expertise, time factor etc.)

### **Aspects for Consideration**

Aspects for consideration in a make or buy study may include:

Item currently bought out

- a) Is there a patent involved which might incur a Royalty payment?
- b) Are the prices being paid the lowest which might be achieved externally?
- c) Does the supplier have a greater purchasing power than the buyer for the materials he obtains?
- d) Is the raw material readily available to the buyer?
- e) Will the withdrawal of business from a supplier jeopardise future supplies should the “ make in” decision be later reversed?

Items currently made in:

- a) Will the quantities interest the outside supplier?

b) Will new tooling be required - and at what cost?

c) Might the part be subject to frequent modification

d) Will a transfer of work create personnel problems?

### **Reasons / considerations for Making**

1) Making is cheaper than buying (Cost considerations)

2) To ensure direct control of quality

3) Delivery times from outside suppliers are too long

4) No suitable suppliers

5) To ensure continuity of supply

6) To utilise spare production capacity (i. e. help to absorb fixed overhead/s)

7) To retain labour during slack trade - declining trade

8) To maintain secrecy / Design secrecy required

9) To utilise scrap / surplus materials

10) Desire to integrate plant operations

11) Desire to maintain a stable workforce (i. e. in periods of declining sales)

12) Need to exert direct control over production and / or quality

### **Reasons / considerations for Buying**

a) Buying is cheaper than making (Cost considerations)



- b) Quantities required are too small for economical production
- c) To avoid cost of specialist plant or labour
- d) To augment capacity
- e) To utilise the vendor's specialist expertise, machinery and/or patents / R&D
- f) To reduce investment in inventory
- g) Transfer of risk to vendor
- h) Own company may not be able to make all it needs of the sort of part (may not have the plant capacity.)
- i) Desire to maintain a multi-source policy
- j) Desire to maintain a stable workforce (i. e. in periods of rising sales)
- k) To "open up" new markets by sourcing overseas
- l) Efficient Procurement

### **Reasons given for reconsidering Make-Buy Decisions**

- 1) Deterioration in supplier's quality performance
- 2) Delivery failure or poor service by existing sources
- 3) Large price increase

4)Volume changes, much larger or smaller quantity requirements for item concerned

5)Pressure to reduce costs

6)Desire to maintain employment of people or utilisation of plant and physical resources in a downturn

7)Need to get earlier or more reliable sources

8)Need for design secrecy

9)Import substitution

10)Supplier's withdrawal from a particular market

## **RESEARCH METHODOLOGY**

In carrying out research, academics have suggested considering using various types of research approach.

The scope of this report is to explore make or buy decision making in manufacturing organization The general principle is that the research strategy or strategies, and the methods or techniques employed, must be appropriate for the questions you want to answer.

This systematically describes the general overview of the link between research question and research design.

To carry out a good project, one must develop his/her own ideas on how best to carry out the research. There are two different types of research route

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generally used by authors when carrying out a research, thesis or project, there are fixed and flexible design. (Robson. c, 2002).

It compares the two different approaches in carrying out a research to petroleum engineers and explorers respectively: The petroleum engineer has a specific goal in mind, to find oil buried below the surface.

Before the engineer begins the investigation on how to acquire the oil a careful study of maps showing features of the geographic area, with this information at hand the engineer will then go and find something specific. To follow the fixed design route, one must generally know what they are looking for, however flexible design encourages one to explore generally. Flexible design could be described as gathering information, going first in one direction and then perhaps retracting that route. On discovering a lake in the middle of a large wooded area, the explorer would take frequent compass readings, check that angle of the sun, takes noted on prominent land marks and then use feedback from each observation to modify earlier information. Carrying out a general research, it is advisable for an initial focus to be mapped out by the researcher as it aids to answer the primary question of (What do I intend to achieve when carrying out this research) The initial stages of carrying out a research can be either problematic or straightforward depending on what sort of research is being carried out.

## **Data collection Techniques**

The aim of the project is to carefully explore make or buy decision making in manufacturing organizations.

In order to carry out a study on make or buy decision making for manufacturing organization. Books, journals, magazines and the internet will be used as a good source to acquire materials which aids in understanding the subject matter.

There are different forms and sorts of data which should be considered before selecting the appropriate material. There are two sources of data one being primary and the other being secondary, the fundamental difference are primary data is data gathered at first hand from people in the general population or sample as the case may be.

In contrast secondary data is the use and application of data that already exists usually from policy documents, newspapers, magazines and so on.

Primary data can sometimes be expensive and can also take a while to collect data as a result of that the source of data that has been collected to build up this report will be mainly secondary. secondary source of data is of better quality because it is usually published so therefore unbiased which means it is not skewed in the favour of research objective. (Robson c., 2002).

### **Qualitative and Quantitative Research approach**

Qualitative research can be described as an exploratory kind of research; its main purpose is to uncover prevailing trends of an opinion.

The approach is concerned with words rather than numbers. This approach aims to investigate an in-depth understanding of its subject matter.

Qualitative research is centrally concerned with understanding a thing rather than measuring them. (Robson. c, 2002).

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Quantitative research In general terms can be described as an approach that is primarily concerned with numbers how it relates to each other rather than words Quantitative research seeks to set up connecting relationships between two or more variables using statically method for testing of the variable's strength and importance of its relationship.

In this project the Qualitative research method will be used extensively as it allows for exploration of the subject to gain in-depth understanding

Many models have being put forward as frame work for research design, below is a model that consist of the key components to a successful research. Adapted from Robson (2002).

Purpose(s) - What is the research trying to achieves the author seeking to change something substantial as a result of this study or trying to explore the effectiveness of something

Theory- Where will the author find the theory that will direct and channel his research What way will the theory be translated

Research questions- To what questions posed by the author are the research geared to provide answers for What study is needed to know to correctly answer the research questions How feasible are the questions poised given the time and the resources available

Methods-What techniques will be used to effectively collect data To what degree will the data be analysed How will the author communicate to other academics/ readers the authenticity of data collected

Sampling Strategy- How will data be collected Who will the author seek to

interview What will be the best way in balancing the need to be selective with the need to collect important data needed

## **Project Plan**

References.

1. Slack, N., chambers, s. 2007. Operations management.
2. Krajewski, L., Ritzman, L. 2007. Operations management.
3. Parmigiani, A. 2007. Why do firms make or buy Investigation of concurrent sourcing strategic management Journal 28: 285-311.
- 4 He, D., Nickerson, JA. 2006. Why do firms make or buy Efficiency, appropriability, and competition in the trucking industry. Strategic Organisation 4: 43-69.
5. Ashall, D. 2010. Lecture notes on procurement and supply chain management.
6. Mitchell, L. 2010. Lecture notes on Manufacturing Strategy.
7. Robson, C. (2002). Real world research. Michigan: Blackwell publishers.