UNIT 138 – UPSC - Make or Buy Decision

The make-or-buy decision is vital process in management field. It is basically action of making a tactical choice between producing an item internally (in-house) or purchasing it externally (from an outside supplier). The buy side of the decision also is called outsourcing. Make-or-buy decisions generally develop when company that has produced a product or part or considerably changed a product or part is having concern with current dealers, or has weakening capacity or varying demand. The make-or-buy issue is complicated which represents a major dilemma faced by several companies. In aggressive competitive business environment, all the manufacturing and services companies must have to reassess their existing processes, technologies, products and services in order to get an opportunity to positively impact the bottom line by making strategically-drawn out make-or-buy decisions.

Make-or-buy analysis is done at the strategic and operational level. Clearly, the strategic level is the more long-range of the two. Variables considered at the strategic level comprise of analysis of the future, as well as the current environment. There are numerous issues that affect make or buy decisions that include government regulation, competing firms, and market trends. Companies should make items that emphasise or are in-line with their core capabilities. In current business situation, people are more aware of make-or-buy decision therefore organizations have difficulty when deciding between keeping technologies/processes in-house and purchasing them from an outside dealer. The highly vibrant nature of the market demand-supply environment forces firms to consider, and reassess, make-or-buy decisions that are based on not just the basic cost-related factors, but also on a multitude of other reasons. Additionally, the make or buy decision are visualized as an operational or tactical level as well as at strategic level. There are longer-term strategic considerations entwined with the make-or-buy decision that has great significance.

Companies that adopt the process of lean manufacturing has prompted an increase in outsourcing. Manufacturers are tending to purchase subassemblies instead of piece parts, and are outsourcing activities that range from logistics to administrative services. In their 2003 book World Class Supply Management, David Burt, Donald Dobler, and Stephen Starling gave a rule of thumb for out-sourcing. It recommended that company outsource all items that do not fit one of the following three categories: (1) the item is critical to the success of the product, including customer perception of important product attributes; (2) the item requires specialized design and manufacturing skills or equipment, and the number of capable and reliable suppliers are extremely limited; and (3) the item fits well within the firm's core competencies, or within those the firm must develop to fulfil forthcoming plans. Items that are suitable under one of these three categories are considered strategic in nature and should be produced internally if possible.

Make-or-buy decisions also happen at the operational level. Analysis in separate texts by Burt, Dobler, and Starling, as well as Joel Wisner, G. Keong Leong, and Keah-Choon Tan, propose these considerations that favour making a part in-house:

- Cost considerations (less expensive to make the part)
- Desire to integrate plant operations
- Productive use of excess plant capacity to help absorb fixed overhead (using existing idle capacity)
- Need to exert direct control over production and/or quality
- Better quality control
- Design secrecy is required to protect proprietary technology
- Unreliable suppliers
- No competent suppliers
- Desire to maintain a stable workforce (in periods of declining sales)
- Quantity too small to interest a supplier
- Control of lead time, transportation, and warehousing costs
- Greater assurance of continual supply
- Provision of a second source
- Political, social or environmental reasons (union pressure)
- Emotion (e.g., pride)

Various factors that may influence company to buy a part externally are as follows:

1. Lack of expertise
2. Suppliers' research and specialized know-how exceeds that of the buyer cost considerations (less expensive to buy the item)
3. Small-volume requirements
4. Limited production facilities or insufficient capacity
5. Desire to maintain a multiple-source policy
6. Indirect managerial control considerations
7. Procurement and inventory considerations
8. Brand preference
9. Item not essential to the firm's strategy

The two vital factors that must be considered in a make-or-buy decision are cost and the availability of production capacity. Burt, Dobler, and Starling advised that "no other factor is subject to more varied interpretation and to greater misunderstanding" Cost considerations comprises of all relevant costs and be long-term in nature. Apparently, the buying firm will compare production and purchase costs. Burt, Dobler, and Starling provide the major elements included in this comparison. Elements of the "make" analysis include:

1. Incremental inventory-carrying costs
2. Direct labour costs
3. Incremental factory overhead costs
4. Delivered purchased material costs
5. Incremental managerial costs
6. Any follow-on costs stemming from quality and related problems
7. Incremental purchasing costs
8. Incremental capital costs

Cost considerations for the "buy" analysis include:

1. Purchase price of the part
2. Transportation costs
3. Receiving and inspection costs
4. Incremental purchasing costs
5. Any follow-on costs related to quality or service

It is to be noted that six of the costs to consider are incremental. Incremental costs would not be incurred if the part were purchased from an outside source. If a firm does not have the capacity to make the part, incremental costs will include variable costs plus the full portion of fixed overhead allocable to the part's manufacture. If the firm has more capacity that can be used to produce the part in question, only the variable overhead caused by production of the parts are considered incremental.

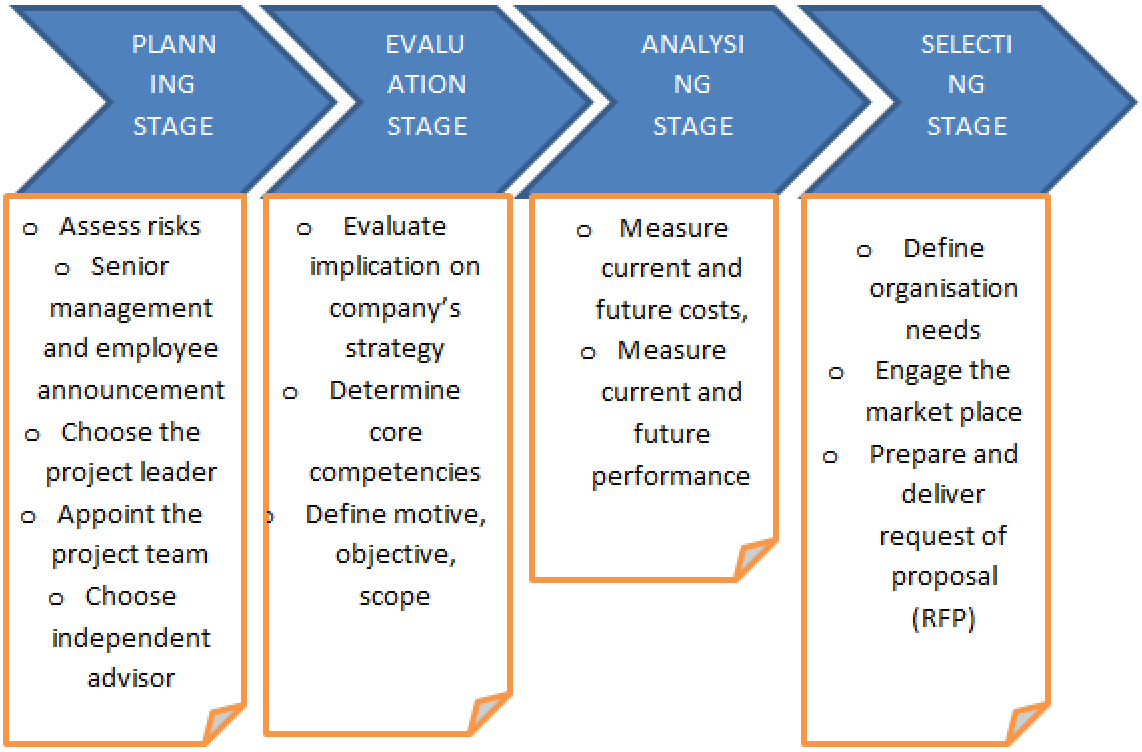
Stanley Gardiner and John Blackstone the contribution-per-constraint-minute (CPCM) method of make-or-buy analysis, which makes the decision based on the theory of constraints (1991). They also used this approach to define the maximum permissible component price (MPCP) that a purchaser should pay when outsourcing. In 2015, Jaydeep Balakrishnan and Chun Hung Cheng observed that Gardiner and Blackstone's method was not reliable procedure for a complicated make-or-buy problem. They presented modified approach using spreadsheets with built-in liner programming (LP) capability to provide "what if" analyses for solution to make and buy. Firms have realized the significance of the make-or-buy decision to overall manufacturing policy and its implication for employment levels, asset levels, and core competencies. Some companies have adopted total cost of ownership (TCO) procedures to integrate non-price considerations into the make-or-buy decision.

Senior management normally face issues of make and buy decision who want to reveal and exploit capability within the links of the supply chain. Make or buy is a decision not to be made on the basis of monetary considerations, since procurement or loss of core competencies may also be involved. Companies must determine how that decision will affect the end product quality and the company's technology when making best make-or-buy decision. There are four stages for successful make-or-buy decision:

1. Building incentive for outsourcing,

2. Exploring strategic implications,
3. Analysing costs/performance,
4. Selecting providers.

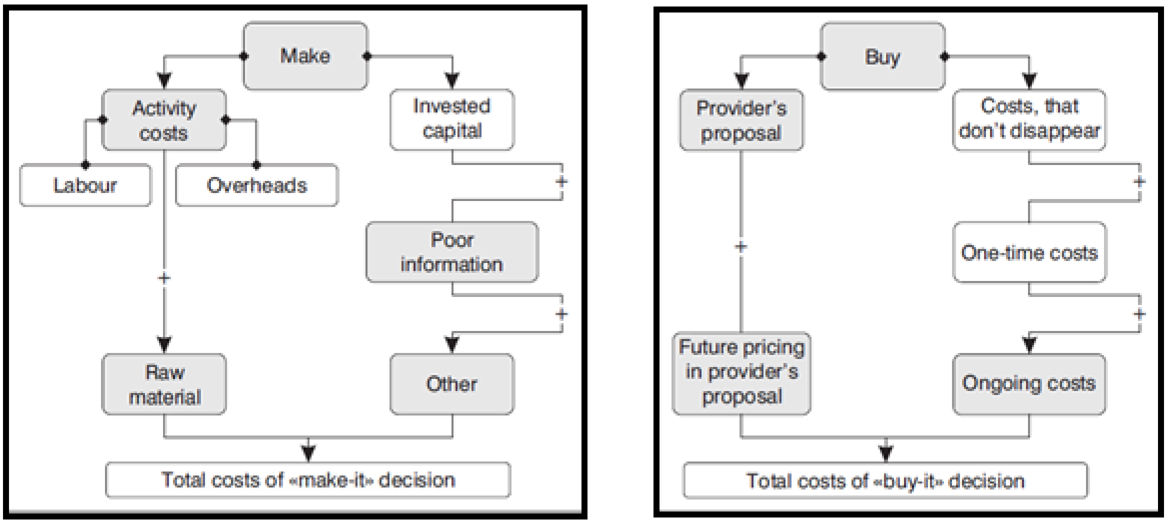
Four stages of make and buy decisions



Advantage of make or buy decision: Make or buy decisions are imperative when manufacturers consider the benefits and shortcomings of buying materials and parts from retailers as opposed to making these items internally. A make or buy decision contributes company's development but it may not be the correct decision for the long term. Make or buy decisions relate to autonomy, and these decisions helps in choosing among more than one option instead of simply accepting the available option. Make or buy decision can save business money if company can lower its materials costs by making items in house. Making these items will possibly increase labour costs, however, company need to balance the savings on materials against the added payroll cost to see whether making items in house or buying them from an outside retailer makes the most financial sense.

There is a flexibility in make or buy decisions to weigh and evaluate a range of considerations, from employee morale to production deadlines. When orders are down and company is unwilling to lay off employees, deciding to produce materials in house can keep workers employed, encouraged and available for any requirement. These benefits may compensate a financial consideration such as a short-term elevated expense for production labour. If deadlines are tight, the option to produce materials in house allows company to continue manufacturing if parts are slow to arrive. Make or buy decisions beneficial to company by control over the materials that go into the products to customers. If company is displeased with the quality of the materials that vendors provide, it can make them itself, in accordance with according to company's specifications. This way, company can offer high quality product.

Figure: Make and buy decisions for outsourcing (Source: P. Bajec, I. Jakomin)



To summarize, the make-or-buy procedure is critical strategic decisions within logistics outsourcing and should be taken in a structured and reliable way. The steps of the make-or-buy decision should be altered according to the specific organization and outsourcing situation. Major steps for make and buy decisions include evaluate whether outsourcing is right for company, determine exactly what functions to outsource and the performance expectations, use a well-defined professional selection process to evaluate and select which provider(s) are right for the job. These decisions are always individual decisions, which have to be taken into consideration as the specific characteristics of each company.