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ACCA F2

Management Accounting (MA)

管理会计

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Part B Service costing

1. Nature of service costing
2. Unit cost measures for service costing
3. Cost per service unit

Part B alternative cost accounting

1. ABC
2. Target costing
3. Life cycle costing
4. Total quality measurement

Part B alternative cost accounting

1. Activity based costing

An alternative to the traditional methods of absorption costing is **activity based costing (ABC)**. ABC involves the identification of the factors (cost drivers) which cause the costs of an organisation's major activities. Support overheads are charged to products on the basis of their usage of an activity.

The **absorption costing approach** that we have learned about so far in this chapter was **developed in a time** when most organisations produced only a narrow range of products and **when overhead costs were only a very small fraction of total costs,** direct labour and direct material costs accounting for the largest proportion of the costs. The value of over- or under-absorbed overhead was therefore not too significant.

Nowadays, however, the situation is different. With the advent of advanced manufacturing technology (AMT), **overheads are likely to be far more important.**

(a) **Activities cause costs**. Activities include ordering, materials handling, machining, assembly, production scheduling and despatching.

(b) **Producing products creates demand for the activities.**

(c) **Costs are assigned to a product on the basis of the product's consumption of the activities.**

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1.1 steps of ABC

Step 1	**Identify** an organisation's **major activities**.
Step 2	**Identify** the factors which determine the size of the costs of an activity / cause the costs of an activity. These are known as **cost drivers**.

A cost driver is the factor which causes the costs of an activity.

Look at the following examples.

Activity	Cost driver
Ordering	Number of orders
Materials handling	Number of production runs
Production scheduling	Number of production runs
Despatching	Number of despatches

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Step 3	Collect the costs of each activity into what are known as cost pools (equivalent to cost centres under more traditional costing methods).
Step 4	Charge support overheads to products on the basis of their usage of the activity. A product's usage of an activity is measured by the number of the activity's cost driver it generates.

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1.2 ABC versus traditional absorption costing method

(1) Allocation:

ABC: cost pool, separate cost driver

traditional : cost center, one cost driver

(2) Appointment :

ABC: many cost driver, absorption rate is more reasonable

Traditional : commonly use labor hours and machine hours

(3) Cost driver and absorption rate:

ABC: greater accuracy

Traditional

1.3 Merits of ABC

(a) Because of the financial reporting requirement to value inventories at full cost, management accounting has not given sufficient priority to the need to provide meaningful product costs and has simply used absorption costing to produce the full cost. **ABC**, on the other hand, focuses attention on the nature of cost behaviour and attempts to provide meaningful product costs.

(b) ABC uses multiple cost drivers to allocate overhead costs to activities and then to products, and does not simply use a meaningless direct labour hour recovery rate or machine hour recovery rate that assumes that overhead costs are related to volume of activity only. Only **ABC** recognises that many overhead costs arise out of the diversity and complexity of operations.

(c) The complexity of manufacturing has increased, with wider product ranges, shorter product life cycles, a greater importance being attached to quality and more complex production processes. **ABC** recognises this complexity with its multiple cost drivers.

(d) In a more competitive environment, companies must be able to assess product profitability realistically. **ABC** facilitates a good understanding of what drives overhead costs.

1.4 Criticisms of ABC

(a) Some measure of (arbitrary) cost apportionment may still be required at the cost pooling stage for items like rent, rates and building depreciation. If an ABC system has many cost pools, the amount of apportionment needed may be greater than ever.

(b) The ability of a single cost driver to explain fully the cost behaviour of all items in its associated pool is questionable.

(c) To have a usable cost driver, a cost must be caused by an activity that is measurable in quantitative terms and which can be related to production output. But not all costs can be treated in this way. For example, what drives the cost of the annual external audit?

(d) ABC is sometimes introduced because it is fashionable, not because it will be used by management to provide meaningful product costs or extra information. If management is not going to use ABC information, a traditional absorption costing system may be simpler to operate.

2. Total quality management

Total quality management (TQM) is the process of applying a zero defect philosophy to the management of all resources and relationships within an organisation as a means of developing and sustaining a culture of continuous improvement which focuses on meeting customer expectations.

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2.1 three basic principles of TQM

5.1 Get it right, first time

One of the basic principles of TQM is that the **cost of preventing mistakes is less than the cost of correcting them** once they occur. The aim should therefore be **to get things right first time.**

Every mistake, delay and misunderstanding directly costs an organisation money through **wasted time and effort**, including time taken in pacifying customers. The **lost potential for future sales because of poor customer service must also be taken into account.**

5.2 Continuous improvement

A second basic principle of TQM is dissatisfaction with the *status quo*: the belief that it is **always possible to improve** and so the aim should be to **'get it more right next time'.**

Customer focus-quality is examined form a customer perspective and the system is aimed at meeting customer needs and expectation .

2.2 quality related cost

- Prevention cost: the costs of any action taken to prevent or reduce defects and failures. This include the cost of preventive maintenance, quality, quality, training and the extra cost of acquiring higher quality ma terials.
- Appraisal costs: the costs incurred to ensure that materials and products meet quality standards. They include costs of inspecting purchased parts, work in process and finished goods, quality audit and filed test.

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- Internal failure costs: the costs arising within the organization of failure to achieve the quality specified. They are discovered before the product is delivered and include “down time “ and scrap costs, repair, stoppage caused by defects.
- External failure costs: the costs incurred when the products or services fail to conform to requirements or satisfy customers, need after theta have been delivered. They include the costs of handling customers complains, warranty replacement, repair of returned product etc.

costs within this category can have a dramatic impact on future sales.

3. Life cycle costing

Life cycle costing tracks and accumulates costs and revenues attributable to each product over the entire product life cycle.

A **product life cycle** can be divided into four phases.

- Introduction
- Growth
- Maturity
- Decline

6.1 What are life cycle costs?

A product's life cycle costs are incurred **from its design stage through development to market launch, production and sales, and finally to its eventual withdrawal from the market**. The component elements of a product's cost over its life cycle could therefore include the following.

(a) **Research and development costs**
(b) The **cost of purchasing any technical data** required
(c) Retirement and disposal costs
(d) **Training costs** (including initial operator training and skills updating)
(e) **Production costs**
(f) **Distribution costs**
(g) **Marketing costs**
(h) **Inventory costs** (holding spare parts, warehousing and so on)
(i) **Costs**

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Life cycle costs can apply to services, customers and projects as well as to physical products.

Traditional cost accumulation systems are based on the financial accounting year and tend to dissect a product's life cycle into a series of 12-month periods. This means that traditional management accounting systems **do not accumulate costs over a product's entire life cycle** and therefore **do not assess a product's profitability over its entire life**. Instead they do it on a periodic basis.

Life cycle costing, on the other hand, **tracks and accumulates actual costs and revenues** attributable to each product **over the entire product life cycle**. Hence the total profitability of any given product can be determined.

6.2 The product life cycle

Every product goes through a life cycle as covered earlier in the Text.

(a) **Introduction**. The product is introduced to the market. Potential customers will be unaware of the product or service, and the organisation may have to spend further on advertising to bring the product or service to the attention of the market.

(b) **Growth**. The product gains a bigger market as demand builds up. Sales revenues increase and the product begins to make a profit.

(c) **Maturity**. Eventually, the growth in demand for the product will slow down and it will enter a period of relative maturity. It will continue to be profitable. The product may be modified or improved as a means of sustaining its demand.

(d) **Decline**. At some stage, the market will have bought enough of the product and it will therefore reach 'saturation point'. Demand will start to fall. Eventually it will become a loss-maker and this is the time when the organisation should decide to stop selling the product or service.

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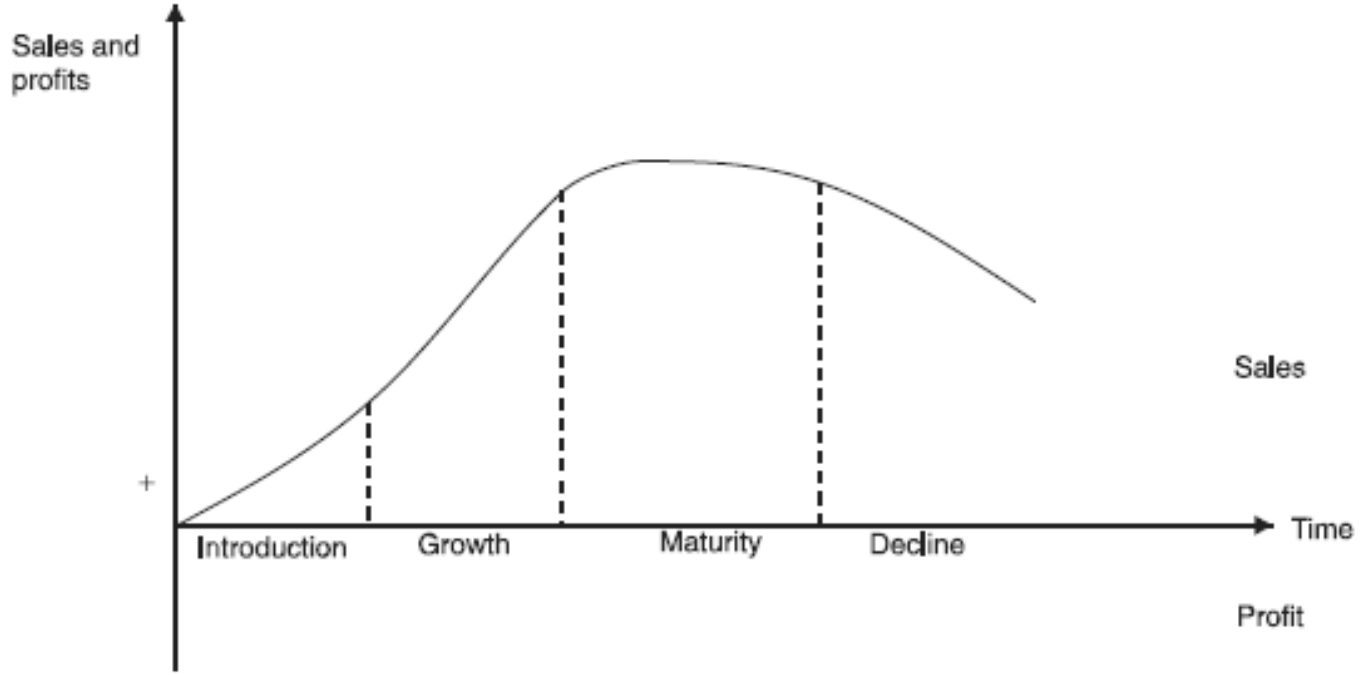
The level of sales and profits earned over a life cycle can be illustrated diagrammatically as follows.



The horizontal axis measures the duration of **the life cycle**, which **can last** from, say, **18 months to several hundred years**. Children's crazes or fad products have very short lives while some products, such as binoculars (invented in the 18th century), can last a very long time.

The benefits of LFC

With life cycle costing, non-production costs are traced to individual products over complete life cycles.

(a) The total of these costs for each individual product can therefore be reported and compared with revenues generated in the future.

(b) The visibility of such costs is increased.

(c) Individual product profitability can be more fully understood by attributing all costs to products.

(d) As a consequence, more accurate feedback information is available on the organisation's success or failure in developing new products. In today's competitive environment, where the ability to produce new and updated versions of products is paramount to the survival of an organisation, this information is vital.

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Product life cycle in forecast

-if an organization knows where a product is in its life cycle, they can use this to plan the marketing of that product more effectively and more importantly, the organization may be able to derive an approximately forecast of its sales from knowledge of the current position of a product in its life.

4. Target costing

Target costing involves setting a target cost by subtracting a desired profit margin from a competitive market price.

Target cost is an estimate of a product cost which is determined by subtracting a desired profit margin from a competitive market price. This target cost may be less than the planned initial product cost but it is expected to be achieved by the time the product reaches the maturity stage of the product life cycle.

Target costing has its **greatest impact at the design stage** because a large percentage of a product's **life cycle costs are determined by decisions made early in its life cycle**.

The technique requires managers to **change** the way they think about the **relationship between cost, price and profit**.

(a) **Traditionally** the approach is to develop a product, determine the production cost of that product and set a selling price, with a resulting profit or loss.

(b) The target costing approach is to develop a product and determine the market selling price and desired profit margin, with a resulting cost which must be achieved.

Target costing process:

Step 1	Determine a product specification of which an adequate sales volume is estimated.
Step 2	Set a selling price at which the organisation will be able to achieve a desired market share.
Step 3	Estimate the required profit based on return on sales or return on investment.
Step 4	Calculate the target cost = target selling price – target profit.
Step 5	Compile an estimated cost for the product based on the anticipated design specification and current cost levels.
Step 6	Calculate cost gap = estimated cost – target cost.
Step 7	Make efforts to close the gap. This is more likely to be successful if efforts are made to 'design out' costs prior to production, rather than to 'control out' costs during the production phase.
Step 8	Negotiate with the customer before making the decision about whether to go ahead with the project.

Exercise

Part B alternative cost accounting

Q1. which one is the advantage of ABC?

A. Provides more accurate product costs

B. Simple to apply

C. A form of marginal costing and so is relevant to decision making

D. Useful when fixed overheads are very low.

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Q2. the selling price of product Knowledge is set at $450 for each unit. If the company requires a return of 20% in the coming year on K, the target cost of K?

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Thank You!