This case study provides an example of strategic management accounting in practice, although that wording is not used in the description. It will help you think about the application of section 19.2 of this chapter.

Covidien (NYSE: COV), a leading global provider of healthcare products, today announced definitive agreements to sell its Sleep Diagnostics and Oxygen Therapy product lines and a proposal to sell its Sleep Therapy product line.

The decision to divest these three product lines was made following a thorough review and evaluation of a number of strategic alternatives. The decision is consistent with Covidien’s strategy to streamline its portfolio and reallocate resources to its faster-growing, higher-margin businesses, where the company has or can develop a global competitive advantage.

Covidien and Embla have entered into a definitive agreement under which Embla will acquire Covidien’s Sleep Diagnostics products, including design/development, sales administration, technical service and shipping facilities in Ottawa, Canada, as well as global sales and service functions. This includes several products sold under the Sandman™ brand. Financial terms of the transaction were not disclosed.

Discussion points
1. How did management accounting help with strategic decisions in this case?
2. How is a consideration of competition evident in the strategic decisions taken?
After studying this chapter you should be able to:

- Explain how strategic management accounting is a feature of business strategy.
- Explain the methods of managing costs with an aim of gaining competitive advantage.
- Explain value chain analysis and the role of management accounting.
- Explain the nature of activity-based management.
- Explain total quality management and the cost of quality.
- Explain business process re-engineering.
- Explain e-business and e-commerce and outline ways in which management accounting may help in developing business strategies that use e-business methods in general and e-commerce in particular.
19.1 Introduction

This chapter provides an initial exploration of the theme of business strategy and the role of management accounting. It is very much an outline of each topic but it may give you ideas for projects where you use library resources for deeper exploration. It also gives you a taste of subjects covered in greater depth in more advanced courses in management accounting. The theme that has flowed through all the chapters of this book is that management accounting is essentially focused on reading the signs and creating a successful business strategy. Simple strategic decisions are shown in the cases of Chapter 1. This chapter takes you into some more complex situations and techniques.

A strategy may be defined as ‘an integrated set of actions aimed at securing a sustainable competitive advantage’. Using this definition a strategy is something more than a long-term plan. It is a statement of how the business intends to reach some preferred state in the future by changing its competitive position to meet changing circumstances.

This chapter explains and illustrates some of the approaches that have been proposed to developing business strategy, where management accounting has a contributory role to play. You have already encountered activity-based costing (Chapter 4), investment appraisal for advanced manufacturing technologies (Chapter 12), benchmarking (Chapter 16) and the Balanced Scorecard (Chapter 16), all of which are techniques developed to support strategic change. They have become an established part of the management accountant’s contribution to ensuring that a business stays vigilant to competitive forces.

19.2 Strategic management accounting

The successful management of a business depends on having a successful business strategy. It has been argued that if the business strategy gives the organisation its competitive edge, then the management accounting should reflect that strategy as closely as possible. The traditional emphasis on costs and revenues may not achieve this aim. What really matters is the influence of the external environment.

19.2.1 Competitive position

Strategy usually includes planning to achieve a better performance than competitors. It is argued that management accounting should show the extent to which the organisation is beating its competitors. Market share, market prospects and the impact of product mix would all be useful information to include in a management accounting report as factors contributing to sales, profits and cash flows.

Another way of looking at the influence of the external environment is to consider competitive advantage in costs. If the business has an influential position as a purchaser of goods and services, then its strategy may include an aggressive policy of negotiating contracts for those goods and services. The just-in-time strategy of ordering goods from suppliers to arrive exactly when they are needed may put strains on the suppliers and force up their costs, increasing the price of the goods. The concept of a value chain has been proposed to describe how the corporate strategy affects the entire chain of value-creating activities. Strategic management accounting might show that £1 saved at one point in the chain has been offset by an extra £2 incurred at another stage.

Advocates of strategic management accounting seek to provide financial and other related information on competitors’ costs and cost structures so that the company’s strategies may be monitored against those of its competitors over a period of time.
Furthermore, there is a need for new forms of internal analysis and accounting processes that will help management devise better strategies. There is strong support for this general direction of strategic management accounting but less agreement on how it may be achieved.

It is not necessary to abandon all that has been learned in the earlier chapters of this textbook. Advocates of strategic management accounting would relate the accounting technique to the strategic aims of the business. Take the example of two companies, one of which is aiming to achieve cost leadership (carrying out activities in a more cost-effective manner than competitors) while the other is focusing on product differentiation (persuading customers that there is a unique aspect of the company’s products). The use of standard costing in assessing performance is very important to the cost leadership company but relatively unimportant to the product differentiation company. Analysis of marketing costs may not be so important in a cost leadership setting, but is absolutely essential to the product differentiation situation.

You have already seen the Balanced Scorecard approach which requires an organisation to translate its vision and strategy into four perspectives: financial focus, customer focus, internal business processes and learning and growth. Companies are encouraged to develop performance indicators under each of these headings which provide a complete view of the company’s performance.

**19.2.2 Case study**

Fiona McTaggart describes her experience of a situation where a strategic approach helped a business to achieve improved performance.

**FIONA:** One of my clients was a telephone utility company. It was in a competitive market where the customer base was growing fast. Costs had been reduced to the limit and competition focused on delivering a good quality of service to the customer.

The first action taken by management was to change the attitude of employees, moving away from an organisation based on functions and towards an organisation based on process. As an example, the sales ledger department was disbanded. Some of the staff joined a customer enquiry unit which allowed one point of contact for matters ranging from sales orders through repairs to accounts enquiries. Others moved to the information technology unit which concentrated on providing information within the organisation. This move recognised internal ‘customers’ as well as external customers.

The next move was to invest in a training programme to encourage customer focus. Staff joining the customer enquiry unit were all trained in customer focus but were also made aware of the way in which their activities drive the costs of the organisation. Their training included a course provided by benchmarking experts who had information about the standards achieved by leading competitors. The company was quite surprised to find how much other companies will share through benchmarking.

You might be thinking that this does not sound much like management accounting, but the focus on activities driving costs led to a rearrangement of management accounting information to use cost drivers and activity-based costing. That approach was used to evaluate type of customer, geographical area of sales and types of product promotion.

The result was continued growth in sales and profit for the company and an expansion in employment opportunities for staff.

**19.2.3 What the researchers have found**

Roslender and Hart (2003) pointed out that after many years of discussion in the academic and professional literature there was still no real agreement on precisely what constitutes strategic management accounting. They traced the various strands of thought on strategic management accounting and, in particular, identified links with strategic marketing. They reported a field study of company practices based on
10 companies that could be regarded as leading-edge companies in their respective industries. The companies were asked about the ways in which they linked management accounting and marketing functions.

In what was labelled as a ‘traditional’ approach the management accounting function was based on a budgetary control system. Marketing managers accepted such controls on their activities as being in the best interests of the business and part of responsibility accounting.

In a transitional approach the management accounting and marketing functions worked together to explore a wider range of management accounting practices within a framework of budgetary control and responsibility accounting. Activity-based costing, customer profitability analysis and direct product profitability were observed, along with attribute costing, strategic cost analysis and target costing. Each of the parties was bringing a wider range of techniques from their respective disciplines. The techniques described under the label of ‘strategic management accounting’ were observed.

The greatest extreme from the traditional approach was seen in what the authors described as synergistic relationships where the management accountants and the marketing managers abandoned the traditions of their respective disciplines to construct what could be described as strategic marketing management accounting. In particular, brand management appeared to be important. The authors concluded that these synergistic relationships had moved beyond the techniques that were usually associated with strategic management accounting.

**Activity 19.1**
Use the specialist searches available through your college library or information service to find two recent articles or research papers covering ‘strategic management accounting’. Write a fifty-word summary of each, explaining the main purposes and findings.

**19.3 Costing for competitive advantage**

This section continues the theme of strategic management accounting by explaining some of the costing techniques that have been proposed for gaining a competitive advantage in cost control. Although the techniques are described separately, in practice they are interrelated as explained by Cooper and Slagmulder (2003). They explain how costs can be reduced by links between customer and supplier as well as cost initiatives within the organisation.

**19.3.1 Target costing and product profitability**

In a competitive market a business may have little influence on the selling price of a product. What the business can do is control its costs more effectively than its competitors, in order to achieve higher profits. The business decides on the profit it needs to achieve from the product, deducts this amount from the selling price, and arrives at a target cost. The target cost is the highest cost that can be incurred if the desired profit is to be achieved.

Target costs can be set at the design stage so that the product profitability can be evaluated before full production begins. The products of competitors may be analysed to work out how they keep costs under control.

**Activity 19.2**
Use the specialist searches available through your college library or information service to find two recent articles or research papers covering ‘target costing’. From the papers write down one benefit and one potential criticism or question about target costing.
What the researchers have found

Everaert and Bruggeman (2002) investigated the impact of cost targets during new product development. They used a laboratory-based research method involving 64 undergraduate students in business administration. The students were asked to design an attractive carpet for a given interior. Some students were given a cost target, while others had no target. Some were given a tight time constraint, while others had more time. This gave four combinations of cost target and time constraint. Complexity of design and use of colours increased the cost, so that there was a trade-off between design quality and cost. A team of judges decided the best designs. There was a modest financial reward for those completing the task within a specified time period and another modest reward for the lowest-cost designers who satisfied the judges. The experiment showed that the cost target prevented designers from experimenting, while the time constraint took precedence over cost concerns. The conclusion was that target costing is only effective where designers have sufficient time to explore alternatives.

Such laboratory-based studies suffer from the lack of reality and the limitations of using students for the experiment, but they have value in being able to control the conditions and achieve comparability.

Lin et al. (2005) reported on China’s use of target costing integrated with an incentive compensation (salary) system. The case study describes the change to target costing in an iron and steel company in 1991, and the subsequent use of target costing in the 1990s. The company achieved significant cost reductions in the period 1991–5 and says that if this had not been achieved it would have been facing bankruptcy. The incentives took the form of a ‘veto’ system – if the subsidiary did not meet the cost targets, the bonus was denied and so were promotions. The authors concluded that the business focused on cost reduction more than on customer satisfaction but this reflected the economic situation of the time.

19.3.2 Customer profitability analysis

Customer profitability analysis focuses on the revenues and costs associated with particular customers or groups of customers. Chapter 4 showed how activity-based costing (ABC) can be used to identify cost drivers. Customers may be one of the cost drivers. Customer profitability analysis calculates the contribution from each customer category. The factors that might differ across customer groups will include:

- geographic location
- size of customer order
- purchasing patterns and preferences of customers
- outlets (retail, direct sales).

19.3.3 Life-cycle costing

A product starts to incur costs long before it comes to the market. The life cycle of a product consists of the entire story from the initial ideas about the product to the end of its life. The early stages are particularly important because a relatively large proportion of the total cost of a product is incurred in the development stage.

When a new product is planned, a life-cycle budget should be prepared. The life-cycle costs that would be contained in this budget include:

- development costs (research and testing)
- design costs (making the product acceptable to the market)
- manufacturing costs
- marketing costs
- distribution costs.
These costs become particularly important where the product life cycle is relatively short and all these costs have to be recovered within a short time period. Those managing the business need to be sure that the sales revenue earned over the projected life of the product will cover the start-up costs as well as the manufacturing or service costs.

**What the researchers have found**

Dunk (2004) noted that life-cycle costing attracts attention in the literature, because of the shorter life cycles of many products. However, relatively little evidence was available about the use of life-cycle costing in practice. He tested the hypothesis that customer profiling, competitive advantage and the quality of information systems information would all have a positive influence on the use of product life-cycle analysis. Customer profiling means that a business gives careful attention to the needs of its customers and how these can be incorporated in product design. Competitive advantage means that a company is using techniques such as fast delivery, flexibility of manufacturing in responding to changes in volume, and control of inventory. The quality of the information system relates to the speed at which businesses can react to such information.

The results of surveying 119 managers in manufacturing companies in Australia was to find relatively little evidence of the use of life-cycle cost analysis. To the extent that it did exist, the positive relationships expected were observed. One possible barrier to life-cycle costing is that the bookkeeping system is not designed to bring out this information.

Moussatche and Languell (2001) used life-cycle costing to compare the costs of different types of flooring materials in schools. They found that the materials ranked as most economical by LCC analysis were not necessarily those with the lowest capital cost. So a policy which selected lower cost materials at the point of installation did not lead to the lowest life-cycle cost. Because of the low initial cost the education authorities chose to replace rather than maintain floor coverings. This appeared to give a cost saving year-on-year but it led to a higher life-cycle cost.

**19.3.4 Kaizen costing**

Kaizen costing is a technique taken from Japanese management practices. It means making improvements by frequent small amounts rather than having major changes at longer intervals. The aim in kaizen costing is to reduce variable costs below the cost level in the base period. It is based on the view that nothing is ever perfect so there will always be some way of making a small improvement. It is part of the culture of the organisation that all employees are encouraged to identify and implement small improvements that reduce costs.

**Activity 19.3**

Use the specialist searches available through your college library or information service to find two recent articles or research papers covering ‘kaizen costing’. From the papers write down one benefit of kaizen costing and one reason for it not being used in all businesses.

**What the researchers have found**

Modarress *et al.* (2005) reported a case study on the use of kaizen costing to develop measures of costing that were suited to lean production systems. They collected information from the Boeing aeroplane manufacturing company in relation to its Interiors Responsibility Center Division. The article describes the implementation of target costing based on a kaizen approach.
Lean accounting

Lean manufacturing involves slimming down and eliminating any unnecessary procedure or resource. The aim is to find the essential resources and essential procedures and use only these. Waste in production has to be identified and eliminated.

What the researchers have found

Nelson (2004) describes how the Delphi Corporation in the USA applied lean manufacturing to its Global Supply Management. Nine strategies were applied and these are presented in the paper by a diagram of cogs in a machine where all the cogs turn at the same time. The company was formed from the parts-making operations of General Motors, the US car manufacturer. It now supplies mobile electronics, transportation components and systems technology around the world. The Delphi manufacturing system aimed at eliminating waste and improving production by employee involvement, workplace organisation, focus on quality, minimising non-productive time, using just-in-time delivery of materials and responding rapidly to customer demand. The Global Supply initiative extended the ideas from the manufacturing system. The nine ‘gears’ could be summarised as covering strategic sourcing, cost management and supplier development engineering. Previously, Delphi had negotiated continuous price reductions with suppliers, but that only gave marginal savings. The new approach identified strategic suppliers who would work closely with Delphi in new methods of supplying high quality materials. The company helped the suppliers to become more competitive compared to other suppliers.

Value chain analysis

The idea of the value chain was popularised by Porter (1985) as a way of describing and analysing the sequence of activities that bring a product or service from its initial stage of production to the final stage of delivery to the customer.

In a competitive environment the business manager should ask: ‘What is our competitive advantage; what do we do well?’ That requires questions about competition – where are the threats? There could be new entrants seeking to join the sector; there could be substitute products or services. There may be strong rivalry within the industry or there may be little interest in competing. Suppliers may have a strong bargaining position; customers may have a strong bargaining position. The manager considers the kind of competition that exists and then plans to deal with that position. Perhaps this business can reduce costs below those of competitors; perhaps it can find a way of differentiating its product to make it attractive to consumers. Porter took the view that a business should choose either a cost focus or a differentiation focus, rather than try to do too much at the same time.

The value chain for any business is a description of the key processes, starting with inputs. Take the example of a plant nursery which grows plants from seedlings and sells them to customers in a garden centre. The managers have identified the competitive advantage as their reputation for growing plants that are hardy to the climate of this region. The value chain is shown in Exhibit 19.1.

Exhibit 19.1
Value chain for nursery and garden centre

| Seed selection | Growing seedlings | Transfer to retail outlet | Advice desk | Sale to customer |

Each stage of the value chain adds value for the business. It is focused on product differentiation. The price may be marginally higher than the prices that would be
charged by national chains selling plants as part of home improvement stores, but the customer is less likely to find the plant has wilted and died within weeks of planting. Advice is given to any enquirers coming into the garden centre, and the advice is based on local knowledge.

Fiona McTaggart has been advising the business on the steps required for value chain analysis. She explains here how she worked with management.

**FIONA:** First we identified the value chain and assigned costs and assets to each stage. Seed selection involves labour cost and storage for seeds taken from the nursery’s own plants. The nursery also buys in new varieties to strengthen the existing strains. Growing seedlings involves further labour cost, greenhouse maintenance, security and plant care materials. There is also a wastage rate to be built in. Transfer to the retail outlet involves transport costs and a risk of loss through inadequate handling. The advice desk is a heavy labour cost specific to this business. The retail sales outlet carries costs similar to those of any retail operation.

Next we considered the cost drivers of each value activity and the interaction of cost drivers. Then we considered the value chains of competitors who can undercut the business.

Just 14 per cent of UK manufacturing companies have adopted the principles of lean accounting, according to new research by accountants and business advisers BDO Stoy Hayward.

BDO Stoy Hayward’s head of manufacturing, Tom Lawton, who is based in Birmingham, said: ‘UK manufacturing continues to make great strides in adopting ideas around lean manufacturing, and we believe that this has been one of the reasons that the sector has been so successful in recent years. However, lean accounting, which provides strong support to the lean manufacturing process, has not been widely adopted, meaning that manufacturers are not using the right financial metrics in measuring and monitoring their improvements under lean manufacturing. As a result, it could be reducing the benefits available under continuous improvement processes.’

The survey shows that the principles of lean accounting are not well understood by most UK manufacturers and this may be the reason for the low take up. ‘But at its heart lean accounting is about establishing a financial reporting system that supports, complements and enhances lean manufacturing – and therefore helps improve a company’s profitability and working capital management’, added Mr Lawton. ‘In the current difficult times this focus on profit and working capital management, particularly the reduction of inventories, is fundamental to the well managed manufacturing business.’


**Discussion points**

1. What kinds of benefits might be available to manufacturers through lean accounting?
2. Why might the principles of lean accounting not be well understood?
on price, but compete less well on product durability. We worked out the relative costs and looked at ways for this business to cut its costs. For example, transferring plants to the garden centre on a just-in-time basis would reduce wastage but requires customer surveys to know when the peaks of demand will arise. We were able to identify some areas for cost control that would enable the business to remain competitive on price without eroding the product differentiation. The managers are pleased that they have this approach to focusing on how they add value at each stage of the chain.

19.4 Activity-based management

19.4.1 Meaning of ABM

Chapter 4 explains the use of activity-based costing (ABC) in establishing the cost of activities by identifying the factors driving the cost of each activity.

ABC is a technique for reporting costs but it does not of itself encourage management to make strategic plans and decisions. Activity-based management (ABM) makes the cost information useful to management by providing cost drivers and performance measures that initiate or support decision making, and supports business planning by providing information to help management in taking long-term strategic decisions. One example might be the decision to sell goods on mail order rather than deliver to shops in town centres. Another example might be the decision to use five different suppliers in different locations rather than one central supplier. These are decisions that require a wide range of considerations but the cost of the activity is one of those considerations. ABM could help with product design by analysing the costs of different approaches to the production process.

ABM encourages continuous improvement by allowing managers to consider the strategic impact of activities and to plan the incentives that will encourage operational teams to implement the desired strategy. A system of ABM would produce the following output in relation to any potential management decision:

- information on the cost of activities and business processes
- the cost of activities that do not add value, such as wastage
- performance measures based on activities, such as a scorecard
- projected costs of products and services
- cost drivers.

Definition

Activity-based management is a system of management which uses activity-based cost information to support and improve decision making. Examples are: cost reduction, cost modelling and customer profitability analysis.

19.4.2 A hierarchy of costs

Activity-based management can be used by managers in identifying the scope for cost reduction. One approach is to consider a ‘hierarchy’, which means thinking about the structure of costs at different levels, starting at the level of the units of output and moving up the organisation to the level of the entire service or production facility. For each level of costs the manager asks: ‘What drives costs?’ Then the manager asks ‘How efficient is this activity and can we manage these costs more effectively?’

Take the example of a company which manufactures children’s clothing. An illustration of a hierarchy of costs and an assessment of efficiency is set out in Exhibit 19.2.
Exhibit 19.2
Hierarchy of costs: drivers and assessment

<table>
<thead>
<tr>
<th>Basis of cost</th>
<th>Drivers</th>
<th>Management assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit level</td>
<td>The costs of each unit are driven by the volume of output, e.g. variable costs of materials and labour.</td>
<td>Our materials are imported at the lowest prices available in the market. Any management of costs will lie in greater efficiency of labour but potential savings are probably 6% at most.</td>
</tr>
<tr>
<td>Batch level</td>
<td>We sell output in batches to major stores. Each batch carries costs of administration, packing and despatch.</td>
<td>We could reduce batch costs if we could concentrate on fewer customers with larger orders, but that would carry greater commercial risk for at most a 3% cost saving.</td>
</tr>
<tr>
<td>Process level</td>
<td>Our process costs consist of supervision and quality controls. At present, these costs are largely driven by time and are relatively insensitive to volume of output.</td>
<td>One of the supervisors is reaching retirement age. If we did not replace that person we could save 30% on process costs. It would involve redefining the supervision process and an assessment of the potential risks.</td>
</tr>
<tr>
<td>Product level</td>
<td>We have 40 product lines, each with its own costs of design, administration and sales negotiation. Costs are therefore driven by the number of product lines.</td>
<td>If we reduced the current forty product lines to thirty, we could save around 20% on product level costs.</td>
</tr>
<tr>
<td>Facility level</td>
<td>The production currently takes place in two locations, 20 miles apart. Each has costs of rent, business rates, maintenance and general management.</td>
<td>We could reduce facility operating costs by 40% if we moved all production to one site and enlarged that operation. The cash raised from selling the second site could be invested in upgrading the other facilities.</td>
</tr>
</tbody>
</table>

The organisation might have guidelines such as:

- A potential cost saving of 50 per cent or more indicates an activity that should not continue in its present form – there is a highly likely opportunity for improving the activity.
- A potential cost saving of 25 per cent to 50 per cent is a major opportunity for improvement.
- A potential cost saving of 15 per cent to 25 per cent is a good opportunity for improvement.
- A potential cost saving of 5 per cent to 15 per cent is relatively modest with opportunities for marginal improvement.
- A potential cost saving of 5 per cent or less indicates that the activity is already efficient.

19.4.3 Customer-driven costs

Customers are essential to an entity because they provide sales revenue, but there are also costs associated with gaining and retaining customers. If the drivers of
customer-related costs are understood, then the costs can be managed more effectively. Drivers of customer costs are:

- **Location of customers.** The distance and geographical spread of customers drives the cost of making contact, communication and delivering to customers.
- **Supply and delivery costs.** If customers order small amounts of product frequently then there will be higher costs associated with taking orders, making up delivery packages and arranging delivery.
- **Sales and promotion costs (including discounts and other incentives).** These will be higher if there are more potential customers or new potential markets for products. These costs will be lower if the business relies largely on established customers making repeat orders.
- **Quality costs.** Some customers may specify standards of quality that cause additional costs to be incurred. If the quality is not sufficiently high the customers may be lost.
- **After-sales service or warranty costs.** Customers may have paid additional fees for after-sales service or repairs under warranty but it is still important to control costs within that amount in order to avoid losses while offering a competitive service.

If the managers of a business understand customer-driven costs they can make strategic decisions about the relative costs of different types of marketing initiatives. One strategy might be to find a small number of high-value customers and invest effort in customer retention and loyalty. An alternative strategy might be to target larger numbers of smaller-value customers and accept a higher rate of customer replacement. Each strategy drives customer-related costs in a different way.

### 19.4.4 What the researchers have found

A Technical Briefing published by the Chartered Institute of Management Accountants (CIMA 2001) summarises the activity-based management model as described by Miller (1996). It explains that ABM has grown out of the work of the Texas-based Consortium for Advanced Manufacturing-International (CAM-I). ABM thinking is not confined to manufacturing businesses because activity-based thinking can equally well apply to service businesses and not-for-profit organisations. The Technical Briefing provides a summary of the circumstances that make ABM useful. It explains that ABC becomes ABM when it is used to:

- design products and services that meet or exceed customers’ expectations, while making a profit;
- indicate that improvements in quality, efficiency and speed are needed;
- guide decisions on product mix or investment;
- choose among alternative suppliers;
- choose methods of targeting markets and customers, and of providing delivery or service to customers;
- improve the value of the organisation’s products or services.

Soin et al. (2002) reported a case study observing the implementation of ABC in a clearing bank at the same time that other organisational changes were taking place. They found that the ABC team were able to implement a form of ABC that revealed new links between costs and products, but they were not able to go so far as to transform the strategic thinking of the bank’s senior management. The researchers analysed the reasons for this apparent failure to turn ABC into ABM. They found that the ABC system was not totally integrated with other management accounting systems and so there was no exploitation of the strategic potential of ABM. Managerial conservatism and a desire to maintain the previous level of managerial discretion led to behaviour
which restricted institutional change. There was also a lack of understanding of the value of the additional ABC information. The researchers used the idea of ‘regressive versus progressive change’ as proposed by Burns and Scapens (2000). Progressive (forward-looking) change was seen in the implementation of ABC, but regressive change (backward-looking pressures) was seen in the failure of management to take strategic benefit from the ABC information.

Searcy (2004) described a case study of a company in the employment services industry. The company was acting as an agency supplying employees to a range of customers. Some customers made very frequent demands for temporary staff covering very short-term placements. Other customers made less frequent demands for staff to cover longer-term placements. ABC costing was used to identify the profitability of the different types of customer and also to assess the four largest customers. From the ABC analysis some management issues were identified for discussion with the customers to achieve more cost-effective ways of requesting temporary agency staff.

Major and Hopper (2005) reported a case study of implementing ABC in a Portuguese telecommunications company. It was problematic because employees provided inaccurate data, production personnel thought it might cause them to lose their jobs and production engineers were sceptical about the usefulness of ABC. Senior managers were enthusiastic. The authors proposed that studies of implementation of ABC should include issues relating to labour processes, consent and resistance.

19.5 Total quality management and cost of quality

The success of Japanese companies in recent years has caused intense interest in Japanese styles of management. One aspect of Japanese management is the approach of ‘get it right first time’. In this spirit, total quality management (TQM) has the customer as its focal point.

Quality is defined as fully satisfying agreed customer requirements at the lowest internal price. TQM is therefore a management function which could be added to those explained in Chapter 1. It straddles the traditional management functions of planning and control. The use of the TQM approach is seen as the key to improving profitability because there is a cost associated with failing to meet quality standards in products and services. Such costs could arise through loss of customers, claims for refunds in respect of defective supplies, and the work of putting right mistakes. If costs can be controlled through TQM, then profits will increase.

Those who are enthusiastic for TQM believe that it is possible to obtain defect-free work first time on a consistent basis. That may be an idealistic target, but to have such a target in the first place encourages a culture where prevention of error is a key feature of the operations.

This activity of improving quality to improve profits will itself cause cost to be incurred. The term cost of quality is a collective name for all costs incurred in achieving a quality product or service.

Cost of quality may be defined by the ‘prevention-appraisal-failure’ model. Prevention costs are the costs of designing, implementing and maintaining the TQM system. They include: quality planning, quality assurance, training and determining specifications for incoming materials, for processes carried out in the operations of the business and for finished products. Appraisal costs are the costs of evaluating suppliers and obtaining an evaluation by customers. They include checking incoming materials and supplies, inspecting equipment and collecting information from customers on satisfaction with goods and services. Failure costs are of two main types: internal failure costs are the costs incurred when it is found, before delivery to customers, that the
work does not reach the desired specification; **external failure costs** are the costs incurred when poor quality work is discovered after the supply to the customer has taken place. Examples of internal failure costs are: waste, scrap, rectification, re-inspection of rectified work and analysis of the causes of failure. External failure costs include: repairs, warranty claims, complaints, returns, product liability litigation and loss of customer goodwill.

The traditional picture of quality control is that in the absence of quality control, failures occur which create **failure costs**. Detection of failure relies on checking after the failure has occurred. The checking process involves further checking costs. With quality controls in place, as prevention work is undertaken, the costs of failure should begin to fall. At the outset, the prevention costs will be additional to the costs of checking for failures, but as confidence grows, and the frequency of failure decreases, the need for checking should diminish. The quality exercise will be successful in cost terms if there is a reduction in total cost over the three headings of prevention, appraisal and failure costs.

TQM ideas are widely practised and there are many non-financial performance measures being used in business organisations. Measuring the cost of quality is a relatively undeveloped area although a few businesses have a well-developed approach. The management accountant as scorekeeper is ideally placed to record and monitor cost of quality, but many of the initiatives emerging are in special units within an organisation which are separate from the ‘traditional’ management accounting functions. Management accountants may need to be proactive in seeking out new ways of applying their generic skills.

---

**Real world case 19.3**

The following extract is taken from an article discussing research into the costs of ‘outsourcing’.

We found that companies commit two common mistakes when deciding to source components from abroad. First, they tend to only calculate the ‘static’ cost of a supply chain, which basically adds the unit cost ex-supplier factory and the transport cost together. Here, the lower labour cost reduces the unit cost of the product, which generally offsets the higher transport cost of bringing it into the UK from China. Often other costs are not considered or underestimated. An example of this is the additional cost for buffer stocks, as the supply chain is inherently less able to respond to swings in demand or changes in technology. Also the risk of obsolescence or running out of stock drastically increases, yet often is not factored into the calculation. The cost of quality defects rises tremendously when a defect is discovered in a shipped batch arriving in Europe and costly air freight has to be used to refill the supply line. And the co-ordination cost of working over long distances is often taken for granted.


**Discussion point**

How is the cost of quality relevant to an evaluation of the costs and benefits of outsourcing?
19.6 Business process re-engineering

Business process re-engineering involves a dramatic redesign of business processes, organisation structures and use of technology to achieve breakthroughs in business competitiveness. The benefits claimed are that operations can be streamlined, and consequently costs can be cut, while creating process excellence in all key aspects of the organisation.

The phrase ‘breaking the china’ has been used by those who describe the technique. They are looking for a quantum leap into being a world leader. They draw the analogy of passing a treasured set of family china from one generation to the next. One day the entire collection falls to the floor in pieces. Putting it together again produces a totally different pattern in the china. In a similar way, if the whole business process is broken up and then restructured with the aim of being a world leader, an entirely new policy will emerge.

The advocates of business process re-engineering explain that, while concentrating on MRP, MRP II, TQM and JIT (see section 12.5), businesses were retaining the traditional ways of working in functional groups. Quality teams were given the task of creating new ways of working within their specific areas or functions. In contrast, business process re-engineering concentrates on the process rather than the function.

Take an example of a company manufacturing engines for heavy goods vehicles. The castings provided by the supplier did not align exactly with the machine which carried them to the assembly line. This had always been accepted as a function of the business operation despite the fact that it caused a pause in production at regular intervals to allow maintenance work necessitated by wear and tear. As a re-engineering of the business process, the supplier was asked to manufacture the castings to a different specification which would align with the machine. This allowed the process to speed up by 30 per cent on previous activity levels and quickly recovered the extra costs charged by the supplier due to the redesign of the castings.

Take as a second example the processing of customer orders. Using the traditional approach, a sales representative visited the customer and took an order. The sales representative initiated the order documentation, giving it an order number and setting up a file on the computer. The product manager received the order, checked that the resources were available for implementation and rewrote the order so that the customer’s description of what was required could be specified in terms of the operations carried out by the business. The customer’s credit rating was checked by the credit controller. This process all took a considerable amount of time because it was not well co-ordinated and there were gaps of time between the stages. As a re-engineering move, the business process was shortened by giving the sales representative a portable computer and a modem to be taken out on visits to clients. This allowed credit rating to be checked on-line, even while the job specification was being discussed with the customer. The computer also included a data sheet on which the sales representative could enter the customer’s order in such a way as to match the specification required by the production department. The information passed directly to the manufacturing premises by way of the modem and the confirmed specification was returned by fax to the customer. The entire operation of specifying and confirming the order could be completed within one hour, while the sales representative was still on hand at the customer’s premises.

The advocates of business process re-engineering emphasise three goals: customer satisfaction, market domination and increased profitability. To win the claim to be a world leader requires success in all three. The business therefore has to identify the core business processes which drive it and to think in terms of process enhancement. Identifying the core business process and ‘reading the market’ helps the company to
find a ‘break point’ where a change in the business process can cause a significant positive reaction in the market and take the company into a leadership position.

For some business processes, re-engineering may be too drastic, especially when new products are being introduced. Continuous quality improvement may be a more achievable target, where analysis of strengths and weaknesses is used to identify short-term achievable improvements on an incremental basis.

19.7 E-business and e-commerce

This section gives a very brief summary of some aspects of e-business and shows how management accounting has a role to play. You can learn more about e-business by using the ‘Further reading’ listed at the end of the chapter.

Electronic business, usually described as ‘e-business’, uses technology to automate and to change existing business practices. It affects product development, marketing, sales and the ways in which goods and services are delivered to customers.

Electronic commerce, usually described as ‘e-commerce’, is one part of e-business. It relates to all transactions between the company and its customers or suppliers, where electronic media are involved. The customer may wish to inspect a catalogue advertising products. The supplier may wish to draw the company’s attention to changes in prices or products. The acts of buying and selling may take place electronically. E-commerce involves aspects of sharing business information about products and services, together with carrying out business transactions.

The theme throughout this book has been that management accounting has a role in:

- planning
- decision making
- control.

Now we consider each aspect of the role of management accounting in e-business and e-commerce.

Activity 19.4

Write down two benefits of e-business and two possible problems of applying accounting controls to e-business.

19.7.1 Planning

The first question that might be asked is: ‘Should we start an e-business venture?’ The entrepreneur may have a vision of a new product or a new market but for any business the key accounting-related questions are: ‘Can we make a profit?’ and ‘Will there be adequate cash flow?’

Revenue and cash inflow

There are examples of e-commerce where businesses sell existing products or services over the internet rather than through shops and offices or by postal mail. From the management accounting point of view, there are new challenges in ensuring that the recording of revenue matches the delivery of goods and services. New control procedures must be devised, with particular attention to the security of electronic data and cash transmission. The accounting records for revenue earned and cash received will be broadly similar to those used in any business. Cash flow may speed up if customers make electronic payment ahead of delivery. Revenue may be lost if the internet-based system is difficult to use, or is not available throughout the day.
Greater challenges arise for management accounting where new forms of revenue are earned by a company through the nature of e-business. These may be described generally as ‘digital services’. Examples include:

- selling banner advertising space on the company’s website;
- earning commission on sales of goods by other businesses that have a hyperlink from the company’s website;
- fees charged for allowing another business to have a ‘shop-front’ on the company’s website.

These create accounting problems where two businesses ‘swap’ advertising space. ‘I will let you advertise on my website if you will let me advertise on yours.’ No cash changes hands but each business is gaining a benefit. This is called ‘barter’, a system of trading which starts in the school playground and extends around the world in places where cash is not readily available. Clearly, there is no cash flow. Should each business estimate ‘revenue’ earned from the sale of advertising? There are costs in creating the advertisements so it seems a reasonable idea to estimate a figure for revenue. However, there is no transaction for the sale of advertising and it is far from clear that the advertiser would actually pay a fee if asked. If that is the case then the estimated value of revenue is zero. There are no easy answers on how to record the value gained from barter transactions.

**Costs and cash outflow**

For the business selling products and services electronically, there remain the costs of producing the product or service. Beyond that, the e-business approach may reduce some costs and increase or create others. The costs that involve cash outflows may be subdivided into (a) set-up costs and (b) operating costs. The role of management accounting in planning is to estimate these costs for comparison with expected revenues.

*Set-up costs* include the costs of hardware and software, including internal networks and external links to suppliers and customers. The set-up costs also include the costs of managing the introduction of the project, developing and testing software, transferring data from the conventional business records to the new electronic system and training staff in using the new technology.

*Operating costs* include all staff costs relating to operating the new system, plus maintenance costs for the electronic system.

*Cost savings* may be set against these new operating costs. The business may be able to reduce the costs of staffing branch outlets, or having more staff time available to deal with problematic incoming telephone enquiries because the routine enquiries are dealt with through the website.

**Decision making**

Chapter 11 has explained various approaches to decision making related to long-term investments. Payback, accounting rate of return, discounted cash flow and internal rate of return have been explained and the calculations illustrated. At the end of Chapter 12 the problems of appraising advanced manufacturing technologies were discussed. They require a different approach to investment appraisal and decision making. E-business offers similar challenges to management accounting for investment appraisal.

Typical questions that might be asked in an e-business decision are:

- Should we make the proposed investment in hardware, software and staff training for information systems to support e-commerce?
- Which of our existing business operations will give the highest return if converted to e-commerce methods?
The difficult task for the management accountant is to identify the incremental cash flows. The questions to be asked are: How much additional revenue can be generated by this new way of working? How much additional cost will be incurred after taking into consideration any planned cost saving? The uncertainties relating to e-business and e-commerce are such that discounted cash flow techniques may be of limited relevance. Payback focuses on how quickly the original outlay can be recovered through cash flows generated.

**19.7.3 Control**

Management accounting helps managers in their control activities through comparing actual costs and revenues with budgeted estimates and through quantifying and highlighting variances. The management accountant is also involved in systems design and the processing controls necessary to protect the assets and the accuracy of accounting records. Non-financial performance measures are a significant element of controlling the e-business activity.

The business receiving cash from e-commerce transactions must have adequate security measures in place. Secure connections are necessary to set up secure links between supplier and customer. Encryption (a coded message) is used for information that is being transferred and for the records held at either end of the link. The customer must be given confidence in the security controls of the supplier. The supplier must be sure that the customer has a good reputation and that the transaction will be honoured.

*Data migration* is one important aspect of moving to e-commerce where the management accountant may have a particularly useful role. Data migration means transferring data from the existing system to the new system. Sometimes this activity is called *populating the database*. Whatever it is called, the activity requires careful control and testing to ensure that no data are lost or corrupted in the process.

**Indicators of success** that evaluate the relative effectiveness of an e-business activity must include a mixture of financial and non-financial measures (sometimes called *metrics*). Two questions to be asked about effectiveness might be:

1. Is the marketing effective?
2. Is the business outcome effective?

*Effective marketing* requires attracting the attention of the potential customer. *Visitor activity* on the site can be measured by *hits* or by *site visits*. A ‘hit’ is recorded every time a piece of information is downloaded, so one visit to the site might result in several hits. Intending customers may be asked to register an e-mail address or to give information about themselves. This is all part of the marketing information that will be analysed by the organisation to reflect activity.

*Effective business outcomes* are assessed using accounting information on revenues and costs. The business might set a target proportion of revenues to be achieved by internet selling. The management accountant will report on achievement of the target. Analysts often enquire about marketing costs because these are effectively an investment for the future. The ratio of marketing costs to revenues for internet business might be compared with the ratio for conventional business.

Non-financial indicators of effective business outcomes might include customer satisfaction surveys, delivery response times, complaints received or frequency of errors in delivery and invoicing.

**19.7.4 Advising small businesses**

Fiona has found that her work advising small and medium-sized enterprises (SMEs) is requiring her to develop an expertise in e-business and e-commerce.
FIONA: I read a survey recently which found that most British SMEs prefer to maintain their own website and run their own e-business. That means they have to cover the cost of designing the website and they pay an in-house webperson to maintain it, involving a salary and other costs of employment. More than 80 per cent of UK businesses have a website. Some 500,000 companies are trading online but many more companies, including most of the 1.9m SMEs, use the Internet as a shop window. Many UK companies are saying that the Internet has transformed sales and marketing, delivery, operations and processing.

However, it seems to me, as a management accountant, that cost planning and control do not appear to rank highly in the decision to move to e-business activity. There is perhaps too strong a focus on revenue and lack of attention to costs and cash flow. As a result we have seen the failure of some ‘dot.com’ businesses where the cash resources have become exhausted. Another survey that I came across found there was little emphasis on budgets or management in the development of e-commerce strategies.

Is e-commerce suited to all SMEs? A decision to move to e-commerce must be related to the overall business strategy and the sales strategy. The business should ask itself:

- Will e-commerce contribute to the competitive advantage of the business?
- Will it add value?
- Will the benefits outweigh the costs?

Take the example of a family business which has built its reputation for selling specialist hand tools to tradespersons and do-it-yourself enthusiasts. It has shops in several large towns but its reputation extends beyond those towns and customers will travel considerable distances to buy specialist tools. The business would be well placed to enter into e-commerce selling because its name is well known, its reputation is established in the retail outlets, which will continue to operate, and the internet can widen the market through direct customer order and delivery to the door.

Take another example of an antiquarian bookseller who buys and sells rare books. Again, the bookseller has an established reputation in trade journals and has been using catalogue-based mail order sales for some years. The business would be well placed to enter into e-commerce by adding a website reference to existing advertising material. It may also improve the bookseller’s ability to find sources of rare books well beyond the local sources traditionally used. Furthermore, since competitors have already established e-commerce outlets, the bookseller may lose market share if it does not move to internet buying and selling.

19.8 Summary

You might ask, having read this chapter, why it is necessary to pay any attention to the previous 18 chapters. The answer is that the ideas described in this chapter are exciting and forward-looking, but they are being used primarily by a selection of the market leaders and the innovators. There is a vast range of businesses which are still using traditional management accounting techniques. That will necessitate an understanding of the traditional approach for some time yet, in a spirit of evolution rather than revolution. So while you should read and think about the new ideas, you will also find it necessary to understand and apply the aspects of management accounting which have been taught traditionally. If you have a strong command of the approach to management accounting set out in the chapters of this book, then you will have the basis on which to build an understanding of the present practice in most business organisations. You will also be in a position to move on to an in-depth study of developments in management accounting in both the academic and the practical spheres.
References and further reading


QUESTIONS

The Questions section of each chapter has three types of question. ‘Test your understanding’ questions to help you review your reading are in the ‘A’ series of questions. You will find the answer to these by reading and thinking about the material in the textbook. ‘Application’ questions to test your ability to apply technical skills are in the ‘B’ series of questions. Questions requiring you to show skills in ‘Problem solving and evaluation’ are in the ‘C’ series of questions. A symbol [S] means that there is a solution available at the end of the book.
A  Test your understanding

A19.1 Define ‘business strategy’ (section 19.1).
A19.2 How does strategic management accounting make use of information about competitors (section 19.2)?
A19.3 How do the managers of a business maintain its competitive position (section 19.2)?
A19.4 What have researchers found about the definition of what strategic management accounting means (section 19.2.3)?
A19.5 How does target costing help maintain competitive advantage (section 19.3.1)?
A19.6 What is customer profitability analysis (section 19.3.2)?
A19.7 How does life-cycle costing help maintain competitive advantage (section 19.3.3)?
A19.8 What is ‘kaizen costing’ (section 19.3.4)?
A19.9 How does lean accounting help maintain competitive advantage (section 19.3.5)?
A19.10 How does value chain analysis help maintain competitive advantage (section 19.3.6)?
A19.11 How does activity-based management develop out of activity-based costing (section 19.4)?
A19.12 What is the management philosophy represented by total quality management (section 19.5)?
A19.13 What are the main components of the cost of quality (section 19.5)?
A19.14 What is the stated purpose of ‘business process re-engineering’ (section 19.6)?
A19.15 What are the three goals of business process re-engineering (section 19.6)?
A19.16 What is e-business (section 19.7)?
A19.17 What is e-commerce (section 19.7)?
A19.18 How can management accounting contribute to planning, decision making and control in e-business and e-commerce (sections 19.7.1, 19.7.2 and 19.7.3)?

B  Application

B19.1 The directors of Coatings plc have decided that specialist paints for use on buses and lorries should become the focus of a new e-business strategy. ‘All we have at present is a call centre where our customers phone in orders’, said the sales manager. ‘Our two main competitors are improving their business-to-business activities by linking to internet providers. Our strengths lie in customer loyalty and the reputation of our product for quality.’
Explain how value chain analysis can be combined with the development of an e-business strategy (300 words).

B19.2 A company manufacturing specialised medical equipment and supplies is currently having a debate internally about developing an e-business strategy. The sales manager wants to develop an e-commerce website. The managing director thinks that electronic methods are not necessary; what really matters is intensive marketing and offering good technical support for the products.
Explain how the management accountant could provide useful information to help this debate come to a conclusion (300 words).
B19.3
Explain how a low-cost airline can use strategic management accounting in developing a business strategy for competing with the traditional airlines (300 words).

C Problem solving and evaluation

C19.1
A company is reviewing its total quality management programme, which does not appear to be making the progress expected. Problems have been identified in:

- Fear of exposing weaknesses in the organisation.
- Lack of commitment from senior executives.
- Seeing it as someone else’s problem.

How could the management accountant help in addressing these problems (300 words)?

C19.2
How could planning of business strategy be useful to a public-sector organisation such as a public library service? Does the idea of competition have any meaning? How can the management accountant help in planning a business strategy for a public library service (300 words)?

C19.3 [S] [CIMA question]
This question has 18 minutes available for writing the answer. The Required sections have marks indicated for each sub-section, which is helpful in deciding how much to write and how much time to spend on each part.

You are the Management Accountant of a small engineering company, which is a member of a large engineering group. The Managing Director has recently joined the company and has little experience of the engineering sector. He has recently returned from the group’s annual management conference. The Managing Director found the seminars very useful but he is a little confused about two topics.

One of the presentations discussed the use of Target Costing within the group. The Managing Director had previously thought that Target Costing would not be appropriate for an engineering group, because he thought it could only be used in an organisation that manufactured similar products. He now realises that he may be confusing Target Costing and Standard Costing. He seeks your help in explaining Target Costing and how it differs from Standard Costing.

Another presentation discussed alternative investment appraisal techniques. The presenter used an example that compared three investments that were evaluated using incremental profit, accounting rate of return, payback and net present value. The presenter argued that net present value is theoretically superior to the other methods. The Managing Director seeks your help in understanding why the net present value technique is superior to the alternative investment appraisal techniques.

Required:
Prepare a report to the Managing Director that:

(a) explains Target Costing and how it differs from Standard Costing; (7 marks)
(b) explains why net present value is superior to the three other investment appraisal techniques stated above. (3 marks)

CIMA Paper P2 – Management Accounting – Decision Management November 2008, Question Four
Case studies

Real world cases

Prepare short answers to Case studies 19.1, 19.2 and 19.3.

Case 19.4 (group case)

A manufacturer of toothpaste has estimated the price at which the product will sell, making use of market surveys and consumer analysis. A profit margin has been set. Finally a target cost has been established by subtracting the expected profit from the estimated selling price. The plant manager and the research and development unit have been asked to design the product in such a way that it can be produced within the target cost.

A rival manufacturer of toothpaste takes a different approach. Here the selling price is again estimated from market surveys and consumer analysis and a profit margin is set. However, the product design is then accepted on the recommendation of the research and development unit and the plant manager focuses on a programme of continuous improvement which will keep costs within acceptable limits.

Is there a role for management accounting in either of these situations?

Notes

4. See also Chapter 4, section 4.5.2.