21 STRATEGIC PERFORMANCE MANAGEMENT

LEARNING OBJECTIVES After studying this chapter, you should be able to:

- describe three competitive strategies that a firm can adopt to achieve sustainable competitive advantage and explain how they influence performance management systems;
- describe the balanced scorecard;
- explain each of the four perspectives of the balanced scorecard;
- provide illustrations of performance measures for each of the four perspectives;
- explain how the balanced scorecard links strategy formulation to financial outcomes;
- distinguish between lead and lag measures;
- outline the benefits and criticisms of the balanced scorecard.

ADVANCED READING

Prior to the late 1980s management accounting performance management systems tended to focus mainly on financial measures of performance. The inclusion of only those items that could be expressed in monetary terms motivated managers to focus excessively on cost reduction and ignore other important variables that were necessary to compete in the global competitive environment that emerged during the 1990s. Product quality, delivery, reliability, after-sales service and customer satisfaction became key competitive variables but none of these was given sufficient importance measured by the traditional management accounting performance management system.

During the late 1980s much greater emphasis was given to incorporating into the management reporting system those non-financial performance measures that provided feedback on the key variables that are required to compete successfully in a global economic environment. However, a proliferation of performance measures emerged. This resulted in confusion when some of the measures conflicted with one another and it was possible to enhance one measure at the expense of another. It was also not clear to managers how the non-financial measures they were evaluated on contributed to the whole picture of achieving success in financial terms. According to Kaplan and Norton (2001a) previous performance management systems that incorporated non-financial measurements used ad hoc collections of such measures, more like checklists of measures for managers to keep track of and improve rather than a comprehensive system of linked measurements.

During the 1990s strategic performance management systems emerged that not only integrated financial and non-financial measures of performance but also facilitated strategy implementation and

contributed to enhanced performance. The aim of this chapter is to describe the major features of these systems.

THE PERFORMANCE MANAGEMENT FRAMEWORK

Otley (1999) identifies five main sets of issues that need to be addressed in developing a framework for managing organizational performance. He suggests that these issues can be represented by the following set of questions:

1. What are the key objectives that are central to the organization's overall future success and how does it go about evaluating its achievement for each of these objectives?
2. What strategies and plans has the organization adopted and what are the processes and activities that it has decided will be required for it to successfully implement these? How does it assess and measure the performance of these activities?
3. What level of performance does the organization need to achieve in each of the areas defined in the above two questions and how does it go about setting appropriate performance targets for them?
4. What rewards will managers (and other employees) gain by achieving these performance targets (or, conversely, what penalties will they suffer by failing to achieve them)? Because the human resources function is often responsible for the rewards systems in many organizations, the linking of rewards to performance targets tends not to be sufficiently emphasized in performance management systems.
5. What are the information flows (feedback and feed-forward loops) that are necessary to enable the organization to learn from its experience and to adapt its current behaviour in the light of that experience? These feedback and feed-forward controls (see Chapter 16) provide information about the extent to which a company is achieving its key strategic aims. This process can range from simple corrective action through to the revision of a corporate strategy if it becomes apparent that the current strategy is proving ineffective.

STRATEGY AND STRATEGIC POSITIONING

A major aim of strategic performance management systems is to facilitate strategy implementation. Strategies can be defined as the means by which an organization plans to achieve its objectives. The chosen strategies have an important influence in determining what performance measures might be appropriate. The linking of strategies and performance measures thus promotes organizational behaviour that supports the implementation of the chosen strategies. Various typologies of strategy (known as strategic positioning) that firms may choose have been identified in the strategic management literature. Porter (1985) suggests that a firm has a choice of three generic strategies in order to achieve competitive advantage. They are:

- A **cost leadership strategy**, whereby an enterprise aims to be the lowest cost producer within the industry thus enabling it to compete on the basis of lower selling prices rather than providing unique products or services. The source of this competitive advantage may arise from factors such as economies of scale, access to favourable raw materials prices and superior technology (Langfield-Smith, 1997).
- A **differentiation strategy**, whereby the enterprise seeks to offer products or services that are considered by its customers to be superior and unique relative to its competitors. Examples include the quality or dependability of the product, after-sales service, the wide availability of the product and product flexibility (Langfield-Smith, 1997).
- A **focusing strategy**, which involves seeking competitive advantage by focusing on a narrow segment of the market that has special needs that are poorly served by other competitors in the industry. A focusing strategy recognizes that differences can exist within segments (e.g. customers and geographical regions) of the same market. Competitive advantage is based on adopting either a cost leadership or product differentiation strategy within the chosen segment.

In practice, firms may choose a combination of the three strategies within the different markets in which they operate. **Strategic positioning** relates to the choice of the optimal mix of the three general strategies.

Miles and Snow (1978) distinguish between **defender** and **prospector strategies**. Defender organizations perceive a great deal of stability in their external environment and concentrate on a narrow and limited mix of products and customers. They compete on product price, quality and customer service rather than innovation and product and market development and do this by focusing on making operations efficient through cost, quality and service leadership. They engage in little product/market development. Prospectors perceive high uncertainty in their environment and are continually searching for new market opportunities. They are the creators of change. They compete through new product innovations and market development. The marketing and research and development functions dominate finance and production, so efficiency and profit performance are not as important as maintaining industry leadership in product innovation.

A firm's choice of performance measures and the emphasis given to them will be influenced by the strategic position it adopts. For example, a firm pursuing a cost leadership or defender strategy will give greater emphasis to cost-based measures and quality and output/input efficiency measures. In contrast, a firm pursuing a differentiation or prospector strategy will give greater emphasis to marketing measures such as percentage market share, percentage of sales from new products, percentage of sales from new markets etc. The performance management system is most effective when it fits with business strategy. Without such a fit, what is being measured (and communicated as important) and what is actually important to the firm are not synchronized with one another (Melnyk *et al.*, 2014).

PERFORMANCE MEASUREMENT AND PERFORMANCE MANAGEMENT SYSTEMS

The terms 'performance measurement system' and 'performance management system' tend to be used interchangeably in the literature but it is possible to distinguish between them. The performance measurement system encompasses the processes for setting goals and collecting, analysing and interpreting performance data. The objective of the process is to convert data into information and to assess the effectiveness and efficiency of action (Neely *et al.*, 1995).

Melnyk *et al.* (2014) state that although performance measurement is important, it is not sufficient to manage an enterprise. There is a complementary need for a performance management system. The performance management system encompasses the processes of assessing the differences between actual and desired outcomes, identifying and flagging those differences that are critical (thereby warranting management intervention), understanding if and why the deficiencies have taken place, and, when necessary, introducing (and monitoring) corrective actions aimed at closing the significant performance gaps.

ALTERNATIVE PERFORMANCE MANAGEMENT FRAMEWORKS

Several different strategic performance management frameworks have been presented in the literature that seek to integrate financial and non-financial measures of performance and also facilitate strategy implementation and enhanced performance. The major strategic performance frameworks that have emerged are:

- a results/determinants framework (Fitzgerald *et al.*, 1991) which the authors apply to the service industry;
- the performance pyramid (Lynch and Cross, 1991a,b);
- the balanced scorecard (Kaplan and Norton, 1992);
- the performance prism framework (Neely *et al.*, 2002).

REAL WORLD VIEWS 21.1

Seven myths about managing performance

The Globe and Mail (Canada) quotes an article written by Professor Pietro Micheli in *Industry Week* in which he listed seven myths about performance management that promote the wrong behaviours. The following is a summary of these myths:

Myth 1: Numbers are objective
Numbers are open to interpretation and manipulation, so there is a danger that the numbers may not be accepted as valid. It is important to communicate what the numbers mean, and why they should be trusted.

Myth 2: Data are accurate
Compiling data is expensive so performance measures must meet cost/benefits criteria.

Myth 3: More measures add more value
Too many performance measures do not provide value since they can confuse and there is no time to use them. Find the measures that are important that tell you something you can act upon and then use just them.

Myth 4: Everyone should be aligned
The typical way in which managers try to create alignment can end up generating bureaucracy and negatively impacting on staff morale. Managers and employees need some discretion to adjust targets to fit their situation. For example, in a provincial health department it would be unwise to expect ambulances in urban and rural areas to hit the same targets.

Myth 5: Incentives do the trick
Managers believe that by setting targets and rewards, they will motivate employees to achieve organizational goals. There is a danger that employees become so fixated on the measures they forget the broader picture.

Myth 6: Performance measures foster change
Organizations often bring in performance indicators to point employees in new directions during periods of change. A dynamic system is required where performance measures are revised regularly.

Myth 7: Control leads to improvements
If you want to make improvements, the system must be dynamic, cost-effective, and encourage learning rather than control. If people feel the effort is really about control, they will be suspicious and disengage and will not result in improvements.

Questions

1. Provide examples of how performance measures might promote the wrong behaviours.
2. Why must performance measures be regularly reviewed and updated?

References

Micheli, P. (2012) 'The seven myths of performance management', 18 December, *Industry Week*. Available at www.industryweek.com/compensation-strategies/seven-myths-performance-management

Schachter, H. (2013) 'Seven myths about managing performance', *The Globe and Mail*, 4 February. Available at www.theglobeandmail.com/report-on-business/careers/management/seven-myths-about-managing-performance/article8122362/

The **balanced scorecard** has become the dominant strategic performance management framework and has tended to overshadow the other frameworks that have emerged. Indeed, its diffusion was so rapid that, as early as 1997, it was labelled as one of the most influential management instruments of the twentieth century (Sibbet, 1997, p. 12). Therefore, because of its widespread use and popularity, we shall concentrate on the balanced scorecard in the remainder of this chapter. The other performance management frameworks have many similarities to the balanced scorecard and describing these frameworks would tend to involve undue repetition. An understanding of these alternative frameworks is unlikely to be essential for most readers but some of the specialist accounting bodies do set examination questions requiring an understanding of these alternative performance frameworks. To meet the requirements of all readers, these alternative performance management frameworks are presented in Learning Note 21.1 in the digital support resources accompanying this book (see Preface for details). You should check your course curriculum to ascertain if you need to read Learning Note 21.1.

THE BALANCED SCORECARD

The need to integrate financial and non-financial measures of performance and identify key performance measures that link measurements to strategy led to the emergence of the balanced scorecard. The balanced scorecard was devised by Kaplan and Norton (1992) and refined in later publications (Kaplan and Norton, 1993, 1996a, 1996b, 2001a, 2001b). The following discussion is a summary of Kaplan and Norton's writings on this topic. Figure 21.1 illustrates how the balanced scorecard provides a framework for implementing an organization's strategy into specific objectives and linked performance measures (specified in terms of targets and actual measures) that are required to achieve each of the specific objectives.

Figure 21.1 emphasizes that the balanced scorecard philosophy creates a strategic focus by translating an organization's strategy into operational objectives and performance measures for the following four perspectives:

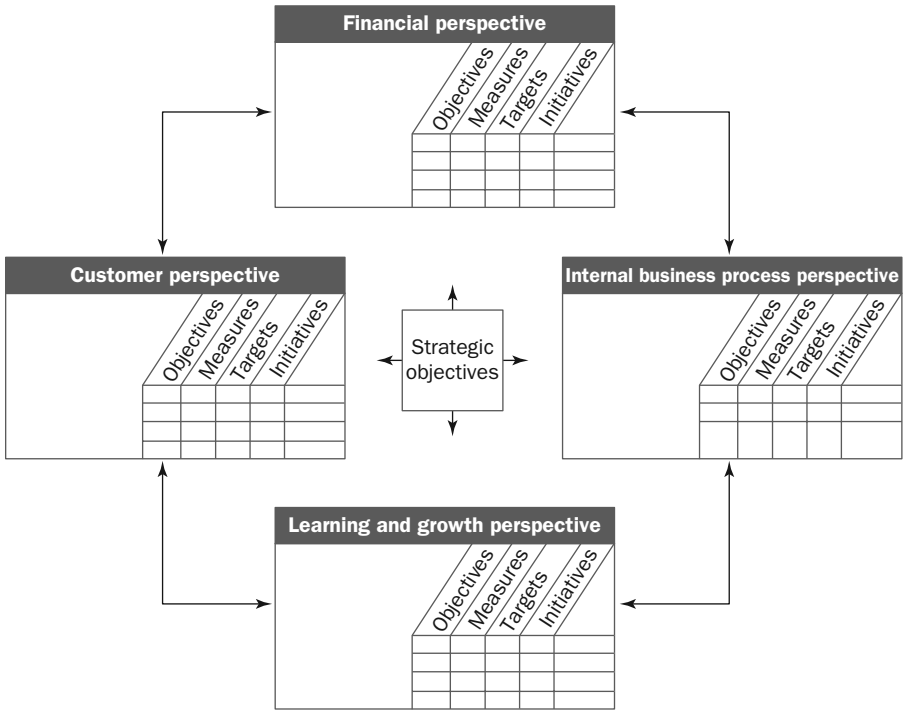
1. **Financial perspective** (How do we look to shareholders?).
2. **Customer perspective** (How do customers see us?).
3. **Internal business perspective** (What must we excel at to satisfy our shareholders and customers?).
4. **Learning and growth perspective** (How can we continue to improve and create value?).

The balanced scorecard is a strategic management technique for communicating and evaluating the achievement of the mission and strategy of the organization. Kaplan and Norton define strategy as:

> Choosing the market and customer segments the business unit intends to serve, identifying the critical internal and business processes that the unit must excel at to deliver the value propositions to customers in the targeted market segments, and selecting the individual and organizational capabilities required for the internal and financial objectives.

You will see by referring to Figure 21.1 that strategy is implemented by specifying the major *objectives* for each of the four perspectives and translating them into specific *performance measures,*

FIGURE 21.1
The balanced scorecard



REAL WORLD VIEWS 21.2

How Southwest Airlines developed its balanced scorecard analysis

Southwest Airlines set 'operating efficiency' as its strategic theme. The four perspectives embodied in the balanced scorecard were linked together by a series of relatively simple questions and answers:

Financial: What will drive operating efficiency?
Answer: More customers on fewer planes.

Customer: How will we get more customers on fewer planes?
Answer: Attract targeted segments of customers who value price and on-time arrivals.

Internal: What must our internal focus be?
Answer: Fast aircraft turnaround time.

Learning: How will our people accomplish fast turnaround?
Answer: Educate and compensate the ground crew regarding how they contribute to the firm's success. Also, use the employee stockholder programme.

The chart below shows how Southwest used this framework to lay out its balanced scorecard model. The first column of the chart contains the 'strategy map', that illustrates the cause-and-effect relationships between strategic objectives. The Objectives column shows what each strategy must achieve and what is critical to its success. The Measurement column shows how success in achieving each strategy will be measured and tracked. The Target column spells out the level of performance or rate of improvement that is needed. The Initiative column contains key action programmes required to achieve objectives. Note that all of the measures, targets and initiatives are all aligned to one an objective.

The company extended the effort to the department level and the degree of development varied between departments. The goal was to identify key performance measures in each segment for the operating personnel. Some of the non-financial metrics that have emerged on a departmental level include: load factor (percentage of seats occupied); utilization factors on aircraft and personnel; on-time performance; available seat miles; denied-boarding rate; lost bag reports per 10 000 passengers; flight cancellation rate; employee head count; and customer complaints per 10 000 passengers filed with the Department of Transportation.

Questions

1. Looking at the internal key answer of 'fast turnaround time', can Southwest always control this?
2. Do you think performance measures like those in the Southwest scorecard are more useful to non-accountants and managers?

Southwest Airlines' balanced scorecard framework

Strategic theme: operating efficiency	Objectives	Measurement	Target	Initiative
Financial Profitability; Fewer planes; More customers	Profitability More customers Fewer planes	Market value Seat revenue Plane lease cost	30% CAGR 20% CAGR 5% CAGR	
Customer Flight is on time; Lowest prices	Flight is on time Lowest prices	FAA on-time arrival rating Customer ranking (market survey)	#1 #1	Quality management Customer loyalty programme
Internal Fast ground turnaround	Fast ground turnaround	On ground time On-time departure	30 minutes 90%	Cycle time optimization
Learning Ground crew alignment	Ground crew alignment	% ground crew trained % ground crew stockholders	Yr. 1 70% Yr. 3 90% Yr. 5 100%	ESOP Ground crew training

Balanced Scorecard Collaborative, Institute of Management & Administration Report on Financial Analysis Planning and Reporting, July 2002

targets and initiatives. There may be one or more objectives for each perspective and one or more performance measures linked to each objective. The balanced scorecard does not focus solely on achieving financial objectives. It also highlights non-financial objectives that an organization must achieve in order to meet its financial objectives in the future. Only the critical performance measures are incorporated in the scorecard. To minimize information overload and avoid a proliferation of measures, each perspective ought to comprise four to five separate measures. Thus, the scorecard can provide *top* management with a fast but comprehensive view in tracking the extent that the organizational unit (i.e. a division/strategic business unit) is implementing strategy. A balanced scorecard should be established for the entire organization and also at lower levels such as divisions and responsibility centres below the divisional level. It is important that scorecards at lower levels within an organization consist of items that the responsibility centre manager can influence, and not by the actions of others, and that relate directly to the performance measures of the entire organization.

We shall now examine each of the four perspectives presented in Figure 21.1. Typical generic objectives and performance measures applicable to each perspective are presented in Exhibits 21.1–21.4 but in practice each organization will customize the objectives and performance measures to fit their own specific strategies. You should also note that Exhibits 21.1–21.4 focus only on core generic objectives and appropriate performance measures but the Balanced Scorecard should also incorporate target values for the measures associated with each objective. In addition, the major initiatives that are required to achieve each objective and the associated performance measure should be described.

The financial perspective

The financial perspective specifies the financial performance objectives anticipated from pursuing the organization's strategy and also the economic consequences of the outcomes expected from achieving the objectives specified from the other three perspectives. Therefore the objectives and measures from the other perspectives should be selected to ensure that the financial outcomes will be achieved. Kaplan and Norton state that they have observed three core financial themes that drive the business strategy: revenue growth and mix, cost reduction and asset utilization.

Generic objectives and possible measures for these themes are shown in Exhibit 21.1. Typical *revenue growth* objectives for a business pursuing a growth strategy include increasing the number of new products, developing new customers and markets and changing to a more profitable product or service mix. Once the objectives have been determined, performance measures should be established that are linked to each objective. Possible measures are listed against each objective in Exhibit 21.1. They are

EXHIBIT 21.1 Financial perspective objectives and measures

Objectives	*Measures*
Revenue growth:	
Increase the number of new products	Percentage of revenues from new products
Develop new customers and markets	Percentage of revenues from new customers/markets
Change to a more profitable product (or service) mix	Sales growth percentage for targeted segments
Cost reduction:	
Reduce product/service cost per unit	Percentage reduction in cost per unit
Reduce selling/general administration costs	Percentage to total revenues of selling and administration costs
Asset utilization:	
Improve asset utilization	Return on investment Economic value added

percentage revenues from new products, percentage revenues from new customers/markets and growth of sales in the targeted segments.

The *cost reduction* objectives may include reduction in unit product costs and a reduction in selling and general and administration costs. Thus the percentage reduction in costs per unit of output for the selected cost objects and the percentage to total revenues of selling and administrative costs represent possible performance measures.

Exhibit 21.1 lists the improvement of *asset utilization* as the major objective of the asset utilization theme. Financial performance measures such as return on investment and economic value added that were described in Chapter 19 provide overall outcome measures of success for the overall financial objectives of revenue growth, cost reduction and asset utilization.

The customer perspective

The customer perspective should identify the customer and market segments in which the business unit will compete. The customer perspective underpins the revenue element for the financial perspective objectives. Therefore the achievement of customer objectives should ensure that target revenues will be generated. Exhibit 21.2 lists five typical core or generic objectives. They are: increasing market share, increasing customer retention, increasing customer acquisition, increasing customer satisfaction and increasing customer profitability. Typical core measures for these objectives (see Exhibit 21.2) are, respectively: percentage market share, percentage growth of business with existing customers, number of new customers or total sales to new customers, ratings from customer satisfaction surveys and profitability analysis by customer segments. The first four measures relate to the means required to achieve customer profitability but they do not measure the outcome. Customer profitability measures meet this requirement. In other words, a company does not want just satisfied customers, it also wants profitable customers.

In addition to the core objectives and measures, additional measures (Kaplan and Norton use the term **customer value propositions**) are needed that represent the attributes that drive the creation of customer value and thus drive the core outcomes relating to the customer perspective. Common product/service attributes encompass the functionality of the products/services, their price and quality and for the customer dimension the delivery time attribute. Focusing on these attributes or measures has the potential to increase customer value and thus have a favourable impact on the core objectives. Typical objectives relating to the above attributes are listed in Exhibit 21.2. They are, respectively: improve product functionality, decrease price relative to competitors, improve quality and improve delivery time. Possible measures for these objectives include, respectively, customer surveys satisfaction scores relating to product functionality, price relative to competitors, percentage of returns from customers and percentage of on-time deliveries.

EXHIBIT 21.2 Customer perspective objectives and measures

Objectives	*Measures*
Core:	
Increase market share	Percentage market share
Increase customer retention	Percentage growth in business from existing customers
Increase customer acquisition	Total sales to new customers
Increase customer satisfaction	Customer survey satisfaction ratings
Increase customer profitability	Customer profitability analysis
Customer value propositions:	
Improve product functionality	Customer survey product functionality rating scores
Decrease price relative to competitors	Price relative to competitors
Improve product/service quality	Percentage returns from customers
Improve delivery time	Percentage on-time deliveries

The internal business perspective

The internal business perspective requires that managers identify the critical internal processes for which the organization must excel in implementing its strategy. Critical processes should be identified that are required to achieve the organization's customer and financial objectives. Kaplan and Norton identify a generic process value chain that provides guidance for companies applying the internal process perspective. The process value chain consists of three processes: the innovation process, the operations process and the post-sales process.

In the *innovation process*, managers research the needs of customers and then create the products or services that will meet those needs. It represents the longer-term aspect of value creation in which companies first identify new markets, new customers and the emerging and latent needs of existing customers. Then continuing on this long wave of value creation companies design and develop new products and services that enable them to reach these new markets and customers. Typical objectives for the innovation process are listed in Exhibit 21.3. They are increasing the number of new products, developing new markets and customers and decreasing the time taken to develop new products. Supporting performance measures are, respectively: percentage of sales from new products (also new product introductions versus competitors), percentage of sales from new markets and development cycle time (e.g. time to the market).

The *operations process* represents the shorter-term aspect of value creation. It is concerned with producing and delivering existing products and services to customers. Objectives of the operation process listed in Exhibit 21.3 include, increasing process efficiency, increasing process quality, decreasing process cost and decreasing process time. Historically, the operations process has been the major focus of most of an organization's performance management system and many possible measures exist. Typical measures associated with each of the objectives for the operations process are listed in Exhibit 21.3.

Process efficiency measures tend to focus on output/input measures such as the **production efficiency ratio** (standard hours of output/actual hours of input) or capacity measures such as the **capacity usage ratio** (actual hours utilized/budgeted hours to be utilized). Quality measures include total quality costs as a percentage of sales derived from the cost of quality report (see Chapter 22), process parts per million defect rates, percentage of defective units and percentage of processes under statistical control.

EXHIBIT 21.3 Internal business perspective objectives and measures

Objectives	*Measures*
Innovation:	
Increase the number of new products	Percentage of sales from new products New product introductions versus competitors
Develop new markets and customers	Percentage of sales from new markets
Decrease the time taken to develop new products	Development cycle time (time to the market)
Operations:	
Increase process efficiency	Output/inputs ratios
Increase process quality	Total quality costs as a percentage of sales Percentage of defective output
Decrease process cost	Unit cost trends
Decrease process time	Manufacturing cycle efficiency
Post-sales service:	
Increase service quality	Percentage of customer requests that are handled with a single call
Increase service efficiency	Output/inputs ratios
Decrease service time	Cycle time in resolving customer problems
Decrease service cost	Unit cost trends

Process cost measures include unit cost trend measures relating to key processes and cycle time measures have evolved that support the objective of decreasing process time.

The total manufacturing cycle time consists of the sum of processing time, inspection time, wait time and move time. Only processing time adds value and the remaining activities are non-value-added activities. The aim is to reduce the time spent on non-value-added activities and thus minimize manufacturing cycle time. A measure of cycle time that has been adopted is **manufacturing cycle efficiency (MCE)**:

$$\text{MCE} = \frac{\text{processing time}}{\text{processing time} + \text{inspection time} + \text{wait time} + \text{move time}}$$

The generic performance measures that have been illustrated above relate to manufacturing operations but similar measures can be adopted for service companies. For example, many customers are forced to queue to receive a service. Companies that can eliminate waiting time for a service will find it easier to attract customers. The time taken to process mortgage and loan applications by financial institutions can involve a considerable amount of non-value-added waiting time. Thus, reducing the time to process the applications enhances customer satisfaction and creates the potential for increasing sales revenues. Therefore service companies should also develop cycle time measures that support their specific customer processing activity objectives.

The *post-sales service process* represents the final item in the process value chain for the operations process perspective. It focuses on how responsive the organization is to customers after the product or service has been delivered. Post-sales services include warranty and repair activities, treatment of defects and returns and the process and administration of customer payments. Increasing quality, increasing efficiency and decreasing process time and cost are also objectives that apply to the post-sales service. Performance can be measured by some of the time, quality and cost measurements that have been suggested for the operations process. For example, service quality can be measured by first-pass yields defined as the percentage of customer requests that are handled with a single service call, rather than requiring multiple calls to resolve the problem. Increasing efficiency can be measured by appropriate output/input ratios and decreasing process time can be measured by cycle time where the process starts with the receipt of a customer request and ends with the ultimate resolution of the problem. Finally, the trend in unit costs can be used to measure the key post-sale service processes.

The learning and growth perspective

To ensure that an organization will continue to have loyal and satisfied customers in the future and continue to make excellent use of its resources, the organization and its employees must keep learning and developing. Hence there is a need for a perspective that focuses on the capabilities that an organization needs to create long-term growth and improvement. This perspective stresses the importance of organizations investing in their infrastructure (people, systems and organizational procedures) to provide the capabilities that enable the accomplishment of the other three perspectives' objectives. Kaplan and Norton have identified three major enabling factors for this perspective. They are: employee capabilities, information systems capabilities and the organizational climate for motivation, empowerment and alignment. Thus this perspective has three major core objectives: increase employee capabilities, increase information system capabilities and increase motivation, empowerment and alignment. The objectives and associated performance measures for this perspective are listed in Exhibit 21.4.

Core measures for the *employee capabilities* objective are concerned with employee satisfaction, employee retention and employee productivity. Many companies periodically measure employee satisfaction using surveys to derive employee satisfaction ratings. Employee retention can be measured by the annual percentage of key staff that resigns and many different methods can be used to measure employee productivity. A generic measure of employee productivity that can be applied throughout the organization and compared with different divisions is the sales revenue per employee.

EXHIBIT 21.4 Learning and growth perspective objectives and measures

Objectives	*Measures*
Increase employee capabilities	Employee satisfaction survey ratings Annual percentage of key staff leaving Sales revenue per employee
Increase information system capabilities	Percentage of processes with real time feedback capabilities Percentage of customer-facing employees having online access to customer and product information
Increase motivation, empowerment and alignment	Number of suggested improvements per employee Number of suggestions implemented per employee Percentage of employees with personal goals aligned to the balanced scorecard Percentage of employees who achieve personal goals

For employees to be effective in today's competitive environment, they need accurate and timely information on customers, internal processes and the financial consequences of their decisions. Measures of *strategic information system capabilities* suggested by Kaplan and Norton include percentage of processes with real time quality, cycle time and cost feedback capabilities available and the percentage of customer facing employees having online access to customer and product information.

The number of suggested improvements per employee and the number of suggestions implemented per employee are proposed measures relating to the objective having *motivated and empowered employees*. Suggested measures relating to the objective of increasing individual and organizational alignment are the percentage of employees with personal goals aligned to the balanced scorecard and the percentage of employees who achieve personal goals.

Lag and lead measures

The balanced scorecard is not simply a collection of critical performance measures. The performance measures are derived from a company's strategy and objectives. The balanced scorecard consists of two types of performance measure. The first consists of **lag measures**. These are the *outcome measures* that mostly fall within the financial perspective and are the results of past actions. Outcome (lag) measures are important because they indicate whether strategy is being implemented successfully with the desired financial consequences. Outcome measures, such as economic value added and return on investment, are normally generic and therefore tend to be common to most strategies and organizations. Lag measures generally do not incorporate the effect of decisions when they are made. Instead, they show the financial impact of the decisions as their impact materializes and this can be long after the decisions were made. The second type of performance measures are **lead measures**, which are the *performance drivers* of future financial performance. They cause the outcome and usually distinguish one strategy from another. They are normally unique to a particular strategy and thus support the objective of linking measures to strategy. Lead measures tend to be the non-financial measures relating to the customer, internal business process and learning and growth perspectives.

Cause-and-effect relationships

One critical assumption of the balanced scorecard is that each performance measure is part of a cause-and-effect relationship involving a linkage from strategy formulation to financial outcomes.

Cause-and-effect relationships are the means by which lead and lag measures are integrated and thus serve as the mechanism for communicating strategy. The chain of cause and effect should permeate all four perspectives of the balanced scorecard. Measures of organizational learning and growth are assumed to be the drivers of the internal business processes. The measures of these processes are, in turn, assumed to be the drivers of measures of customer perspective, while these measures are the driver of the financial perspective. The assumption that there is a cause-and-effect relationship is necessary because it allows the measurements relating to the non-financial perspectives to be used to predict future financial performance.

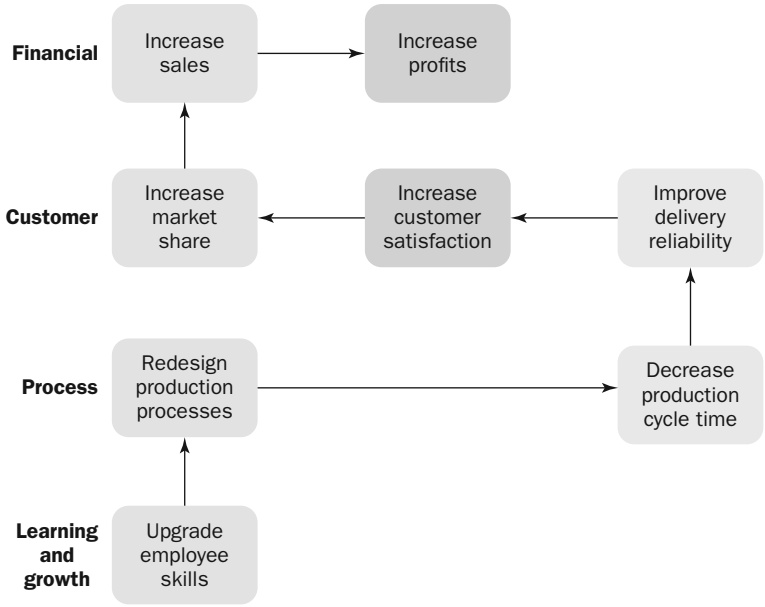
Kaplan and Norton (1996b) state that strategy can be viewed as a set of hypotheses about cause and effect, thus enabling a scorecard to tell the story of a business unit's strategy through a sequence of cause-and-effect relationships. The measurement system should make relationships (hypotheses) among objectives (and measures) in the various perspectives explicit so that they can be managed and validated. Every measure selected for a balanced scorecard should be an element of a chain of cause-and-effect relationships that communicates the meaning of the business unit's strategy to the organization.

Cause-and-effect relationships can be expressed by a sequence of if-then statements. For example, a link between improved training of workers to perform multiple tasks and higher profits can be established through the following sequence of if-then statements:

> If employee skills are upgraded to perform multiple tasks by undertaking support activities such as duties relating to set-ups, minor repairs, preventive maintenance, quality inspection and operating different machines within the cell, then manufacturing processes can be redesigned by moving from a batch production functional layout to a cellular JIT manufacturing system. If the manufacturing processes are redesigned then cycle time will decrease; if cycle time decreases, then delivery time will decrease; if delivery time decreases, then customer satisfaction will increase; if customer satisfaction increases, then market share will increase; if market share increases, then sales revenues will increase; if sales revenues increase then profits will increase.

The strategy map shown in Figure 21.2 illustrates the process redesign strategy as described by the above sequence of if-then statements, and indicates that the chain of cause-and-effect relationships encompasses all four perspectives of the balanced scorecard. Also note that a performance measure can

FIGURE 21.2
Strategy map



REAL WORLD VIEWS 21.3

How ZYSCO uses the balanced scorecard (BSC)

An article by Chen *et al*. (2015) published in *Strategic Finance* described how Zhongyuan Special Steel Co. (ZYSCO), a typical Chinese state-owned company, introduced a new strategic management system that would integrate its value creation strategy into everyone's day-to-day job. The BSC was the core of this new system. The foundation for implementing a balanced scorecard (BSC) was ZYSCO's strategy map. The BSC task force first drew the strategy map shown in Figure 1. Next, the BSC was developed based on ZYSCO's strategy map. Figure 2 shows the BSC and indicates how the strategic objectives were translated into performance measures.

Since the steel industry in China had large overcapacity problems, the company downplayed revenue growth and production capacity as financial measures and focused on increasing net income by controlling costs and expenses. For the customer perspective, customer satisfaction rate is based on a customer survey, which includes evaluation of product quality, on-time delivery, after-sale service and so on.

ZYSCO's BSC was then decomposed by departments creating BSCs using the company's strategy map and BSC as a guide. The authors concluded that ZYSCO's compensation system should be linked to the new system and new measures.

Questions

1. Based on ZYSCO's BSC and strategy map, create a BSC for either the finance or sales departments.
2. What problems might arise with ZYSCO seeking to link its compensation system with its new system and measures?

Reference

Chen, Y., Lu, Z. and Lin., T.W. (2015) 'How ZYSCO uses the balanced scorecard', *Strategic Finance*. Available at sfmagazine.com/past-issues/past-issues-archive-detail/?monthNumber=1&yearNumber=2015

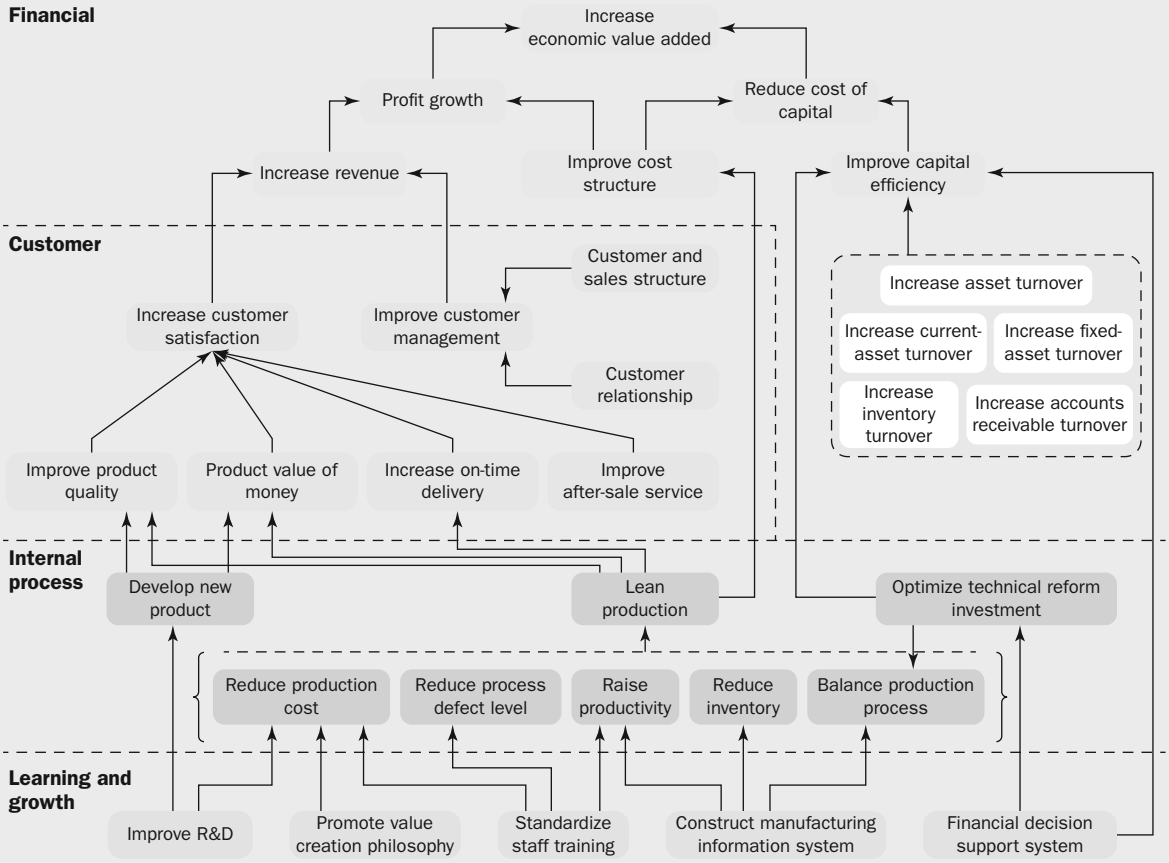


FIGURE 1
ZYSCO strategy map

KEY STRATEGIC OBJECTIVES	MEASURES	WEIGHT	TARGET
FINANCIAL PERSPECTIVE			
Increase revenue	Net income	18%	Budget
	Gross profit margin	10%	Budget
Improve cost structure	Costs and expenses	15%	Budget
Improve capital efficiency	Assets turnover	10%	Budget
CUSTOMER PERSPECTIVE			
Increase customer satisfaction	Customer satisfaction rate (based on customer survey)	6%	95%
Improve customer management	Customer retention rate	6%	100%
	Percentage of sales from high-profit products	5%	Budget
INTERNAL PROCESS PERSPECTIVE			
Develop new product	Number of new products	2%	As planned
Lean production	Implementation of lean production (evaluated by board)	5%	95%
	Manufacturing cost reduction	5%	Budget
	Capacity balance	5%	As planned
Optimize technical reform investment	Return on technical reform investment	5%	Budget
LEARNING AND GROWTH PERSPECTIVE			
Improve R&D	Number of new patents	1%	As planned
Promote value creation philosophy	Promotion of value creation (evaluated by board)	1%	95%
Standardize staff training	Training evaluation (evaluated by board)	2%	95%
Manufacture information integration system	System coverage (evaluated by board)	2%	80%
Financial decision support system	Financial decision support (evaluated by board)	2%	90%

FIGURE 2
ZYSCO balanced scorecard

serve as both a lag indicator and a lead indicator. For example, cycle time is an outcome measure (i.e. a lag measure) arising from improving employee skills and redesigning processes. Improvements in cycle times also serve as a lead indicator in terms of its influence on delivery time measures.

LINKING PERFORMANCE EVALUATION WITH THE BALANCED SCORECARD

Look at Figure 21.1. You will see that, besides objectives and measures, targets and initiatives are also incorporated in the balanced scorecard. Target values should be established for the measures associated with each objective. In addition, the major initiatives for each objective should be described. The scorecard objectives, initiatives and measures become the means for conveying the strategy of the organization to its employees and managers. Responsibility centre objectives and measures should also be aligned with the scorecard objectives and measures.

For feedback reporting, actual performance measures should also be added and compared with target values. The reward system should also be linked to the achievement of the scorecard objectives and measures. Failure to change the reward system may result in managers continuing to focus on short-term financial performance at the expense of concentrating on the strategic objectives of the scorecard. A US study indicates that the balanced scorecard approach is linked to incentive compensation schemes. Epstein and Manzoni (1998) reported that 60 per cent of the 100 large USA organizations surveyed linked the balanced scorecard approach to incentive pay for their senior executives.

Exhibit 21.5 provides an illustration of linking the reward system with objectives, targets and performance measures. Weights expressed as percentages shown in the parentheses are used to indicate the relative importance that management has assigned to each perspective and objective. You will see that each perspective is assigned a weight of 25 per cent. Within each perspective, there are multiple objectives and

EXHIBIT 21.5 Illustration of a target and weighting incentive scheme

Perspectives	*Objectives*	*Measures*	*Targets*
Financial (25%)	Increase economic value added (25%)	Economic value added	20% increase
	Increase return on investment (25%)	Return on investment	20% increase
	Increase revenues (25%)	Sales revenues	25% increase
	Decrease process costs (25%)	Process costs	15% decrease
Customer (25%)	Increase market share (25%)	Market share	20%
	Increase customer retention (35%)	Repeat orders	60%
	Improve delivery time (40%)	On-time delivery (per cent)	100%
Internal processes (25%)	Improve cycle time (70%)	Cycle time	three days
	Increase process quality (30%)	Percentage defects	0.01%
Learning and growth (25%)	Improve employee skills (100%)	Hours of training	35 hours per employee

measures. For example, within the customer perspective there are three performance measures and management has assigned a weight of 25 per cent to increasing market share, 35 per cent to increasing customer retention and 40 per cent to an improvement in on-time delivery. The percentage weightings are used to structure the reward system. Therefore, in Exhibit 21.5, 10 per cent (40% × 25%) of the reward would be assigned to the delivery objective.

Note that the achievement of the objectives and targets shown in Exhibit 21.5 is based on cause-and-effect relationships. For example, increasing economic value added by the targeted 20 per cent is dependent on increasing sales revenues by a target of 25 per cent and decreasing process costs by 15 per cent. These changes are, in turn dependent on other outcomes in other perspectives such as increasing market share and reducing cycle times by the target levels.

The actual values of the measures are compared with the target measures for a given time period. The design of a performance evaluation and reward system that is linked to multiple perspectives and objectives presents a number of difficulties. In Exhibit 21.5, equal percentage weightings have been allocated to each perspective but there is no reason why management may choose to assign different percentage weightings.

A further problem arises when some of the target performance measures are achieved but others are not achieved. For example, in Exhibit 21.5, assume for the customer perspective that the target performance measures of 60 per cent for repeat orders and 100 per cent for on-time delivery were achieved but the actual increase in market share was 15 per cent compared with the target of 20 per cent. Should managers be given rewards when not all of the measures for the objectives within the customer perspective have been achieved? One possible solution is for the rewards to be based on the percentage achievement of each objective. Therefore, because the percentage achievement for increasing market share was 75 per cent (15 per cent actual performance compared with a target of 20 per cent) the percentage of the total reward would be 4.7 per cent (25% × 25% × 75%) compared with 6.25 per cent (25% × 25% × 100%) had the 20 per cent target market share been achieved. There is a danger with this approach that insufficient attention will be given to all the performance measures. To avoid this, the reward system could specify that no reward be given unless and until strategic measures exceed a specified minimum value.

It is also important that the linking of the balanced scorecard to a performance evaluation and reward system incorporate an appropriate time dimension. An adequate amount of time must elapse between the implementation of a strategic initiative and the ascertainment of whether the strategy has been successful. Thus lag measures incorporated in the financial perspective can be expected to have a longer time perspective than the lead measures incorporated in the other perspectives. A possible approach is for the performance evaluation and reward system to incorporate short-term one-year targets and longer term targets (e.g. a three- to five-year time horizon).

Research evidence suggests that companies that use the balanced scorecard may continue to base their incentives mainly on financial measures. A study by Kraus and Lind (2010) of eight of Sweden's largest multinational companies that had adopted the balanced scorecard at the corporate level reported that incentives at this level were largely based on financial measures and that corporate control was also financially focused. The authors conclude that because financial markets focus on financial measures incentives are also based on encouraging managers to focus on the same measures that are used by financial markets. Kraus and Lind point out that their research focused on the impact of the balanced scorecard on control at the corporate level and that there was a need to undertake further research to ascertain whether companies that use balance scorecards at lower business unit levels also link their reward systems mainly to financial measures at these lower levels.

BENEFITS AND LIMITATIONS OF THE BALANCED SCORECARD APPROACH

The following is a summary of the major benefits that can be attributed to the balanced scorecard approach:

1. The approach improves communications within the organization and promotes the active formulation and implementation of organizational strategy by making it highly visible through the linkage of performance measures and targets to business unit strategy.
2. It links financial and non-financial measures by identifying those non-financial measures that are leading indicators of future financial performance.
3. The balanced scorecard limits the number of measures used by focusing on the most critical. It thus avoids a proliferation of measures by focusing management's attention on only those that are vital to the implementation of strategy.

The balanced scorecard has also been subject to frequent criticisms. Most of them question the assumption of the cause-and-effect relationship and the absence of a time dimension. It is argued that the cause-and-effect relationships are merely hypotheses that are too ambiguous and lack a theoretical underpinning or empirical support.

One critical element of the balanced scorecard in guiding strategic improvement is the recognition that an adequate amount of time must elapse between the implementation of a strategic initiative and the determination of whether the strategy has been successful in increasing financial lag measures (Atkinson, 2006). A major criticism of the balanced scorecard is the absence of any time dimension. This presents a problem when there are differences in the timing of the effects of the various lead measures resulting in the outcomes occurring at different points in time. It is therefore difficult to determine the extent to which a particular lead indicator has had an impact on a lag measure when other lead indicators, occurring at different points in time, are also impacting on the lag measures. A number of researchers have commented on the absence of a time dimension in the balanced scorecard (Nørreklit, 2000; Bukh and Malmi, 2005; Franco-Santos and Bourne, 2005). For example, Norreklit argued that the absence of an explicit time dimension as part of the scorecard makes it impossible to establish cause-and-effect relationships. Several studies also suggest that causal linkages between non-financial performance drivers and financial outcome measures were often neither specified nor well understood (Malmi, 2001; Ittner and Larcker, 2003). In a study of the use of balanced scorecards in Finnish companies, Malmi (2001) found that, despite interviewees' claims to the contrary, links between strategy and balanced scorecard measures were weak and causal linkages between multiple measures were difficult to explain.

Other criticisms relate to the omission of important perspectives, the most notable being the environmental/impact on society perspective (see Chapter 23) and an employee perspective. It should be

EXHIBIT 21.6 Surveys of practice relating to balanced scorecard usage

Surveys indicate that even though the balanced scorecard did not emerge until the early 1990s it is now widely used in many countries throughout the world. A Bain & Company survey by Rigby and Biolodeau (2013) of a broad range of international executives in 1221 firms reported a 73 per cent predicted usage rate of the balanced scorecard in 2013. In the UK, a survey of 163 manufacturing companies (annual sales turnover in excess of £50 million) by Zuriekat (2005) reported that 30 per cent had implemented the balanced scorecard. Other studies in mainland Europe indicate significant usage. Pere (1999) reported a 31 per cent usage rate of companies in Finland with a further 30 per cent in the process of implementing it. In Sweden, Kald and Nilsson (2000) reported that 27 per cent of major Swedish companies have implemented the approach. Oliveras and Amat (2002) report widespread usage in Spain and Speckbacher, Bischof and Pfeiffer (2003) report a usage rate of 24 per cent in German-speaking countries (Germany, Austria and Switzerland). Major companies adopting the balanced scorecard include KPMG Peat Marwick, Allstate Insurance and AT&T (Chow, Haddad and Williamson, 1997).

In terms of the perspectives used, Malmi (2001) conducted a study involving semi-structured interviews in 17 companies in Finland. He found that 15 companies used the four perspectives identified by Kaplan and Norton (1992) and two companies added a fifth – an employee's perspective. The UK study by Zuriekat (2005) reported that virtually all of the balanced scorecard respondents used the financial, customer and internal business process perspectives. Other perspectives used were learning and growth, employee, supplier and the environment. The respective percentage usage rates for the balance scorecard adopters were 39 per cent, 45 per cent, 65 per cent and 26 per cent. The study also reported that 35 per cent of the adopters linked their reward systems to the balanced scorecard. A study by Olve, Roy and Wetter (2000) found that 15–20 performance measures are customarily used.

noted, however, that Kaplan and Norton (1996b) presented the four perspectives as a suggested framework rather than a constraining straitjacket. There is nothing to prevent companies adding additional perspectives to meet their own requirements but they must avoid the temptation of creating too many perspectives and performance measures since one of the major benefits of the balanced scorecard is its conciseness and clarity of presentation.

Our discussion relating to the core objectives and measures of the four perspectives has concentrated mainly on the manufacturing organizations. The balance scorecard, however, has been widely adopted in service organizations. Exhibit 21.7 provides an illustration of potential balanced scorecard performance measures for different types of service organization. You will also find it appropriate at this point to refer to Exhibit 21.6 which summarizes surveys of practice relating to the usage of the balanced scorecard.

EXHIBIT 21.7 Potential scorecard measures in different business sectors

	Generic	*Healthcare*	*Airlines*	*Banking*
Financial strength (Looking back)	Market share Revenue growth Operating profits Return on equity Stock market performance Growth in margin	Patient census Unit profitability Funds raised for capital improvements Cost per care Per cent of revenue – new programmes	Revenue/cost per available passenger mile Mix of freight Mix of full fare to discounted Average age of fleet Available seat miles and related yields	Outstanding loan balances Deposit balances Non-interest income

EXHIBIT 21.7 (*continued*)

	Generic	*Healthcare*	*Airlines*	*Banking*
Customer service and satisfaction (Looking from the outside in)	Customer satisfaction Customer retention Quality customer service Sales from new products/ services	Patient satisfaction survey Patient retention Patient referral rate Admittance or discharge timeliness Medical plan awareness	Lost bag reports per 10 000 passengers Denied boarding rate Flight cancellation rate Customer complaints filed with the DOT	Customer retention Number of new customers Number of products per customer Face time spent between loan officers and customers
Internal operating efficiency (Looking from the inside out)	Delivery time Cost process quality Error rates on shipments Supplier satisfaction	Weekly patient complaints Patient loads Breakthroughs in treatments and medicines Infection rates Readmission rate Length of stay	Load factors (percentage of seats occupied) Utilization factors on aircraft and personnel On-time performance	Sales calls to potential customers Thank you calls or cards to new and existing customers Cross selling statistics
Learning and growth (Looking ahead)	Employee skill level Training availability Employee satisfaction Job retention Amount of overtime worked Amount of vacation time taken	Training hours per caregiver Number of peer reviewed papers published Number of grants awarded (NIH) Referring MDs Employee turnover rate	Employee absenteeism Worker safety statistics Performance appraisals completed Training programme hours for employee	Test results from training knowledge of product offerings, sales and service Employee satisfaction survey

SUMMARY

The following items relate to the learning objectives listed at the beginning of the chapter.

- **Describe three competitive strategies that a firm can adopt to achieve sustainable competitive advantage and explain how they influence performance management systems.**

Porter (1985) suggests that a firm has a choice of three generic strategies to achieve sustainable competitive advantage. A firm adopting a cost leadership strategy seeks to be the lowest cost producer within the industry thus enabling it to compete on the basis of lower selling prices. A differentiation strategy applies when a firm seeks to offer products or services that are considered by its customers to be superior and unique relative to its competitors. Finally, a firm can adopt a focus strategy, which involves focusing on a narrow segment of the market that has special needs that are poorly served by other competitors. More emphasis is likely to be given to cost-based performance measures in firms pursing a low cost strategy whereas firms following a product differentiation strategy are likely to have a greater need for market-based performance measures.

- **Describe the balanced scorecard.**

Recent developments in performance evaluation have sought to integrate financial and non-financial measures and assist in clarifying, communicating and managing strategy. The balanced scorecard attempts to meet these requirements. It requires that managers view the business

from the following four different perspectives: (a) financial perspective; (b) customer perspective; (c) internal business process perspective and (d) learning and growth perspective. Organizations should articulate the major goals for each of the four perspectives and then translate these goals into specific initiatives and performance measures. Each organization must decide what its critical performance measures are. The choice will vary over time and should be linked to the strategies that the organization is following.

- **Explain each of the four perspectives of the balanced scorecard.**

The financial perspective provides objectives and associated performance measures relating to the financial outcomes of past actions. Thus, it provides feedback on the success of pursuing the objectives identified for the other three perspectives. In the customer perspective objectives, performance measures and initiatives should be established that track a business unit's ability to create satisfied and loyal customers. They relate to market share, customer retention, new customer acquisition, customer satisfaction and customer profitability. In the internal business perspective, managers identify the critical internal processes for which the organization must excel in implementing its strategy. The principal internal business processes include the innovation processes, operation processes and post-service sales processes. The final perspective on the balanced scorecard identifies the infrastructure that the business must build to create long-term growth and improvement. The following three categories have been identified as falling within this perspective: employee capabilities, information system capabilities and motivation, empowerment and alignment.

- **Provide illustrations of performance measures for each of the four perspectives.**

Within the financial perspective, examples include economic value added and residual income. Market share and customer satisfaction ratings are generic measures within the customer perspective. Typical internal business perspective measures include percentage of sales from new products (innovation processes), cycle time measures such as manufacturing cycle efficiency (operation processes) and percentage returns from customers (post-service sales processes). Measures of employee satisfaction represent generic measures within the learning and growth satisfaction.

- **Explain how the balanced scorecard links strategy formulation to financial outcomes.**

The balanced scorecard philosophy translates an organization's vision and strategy into operational objectives, initiatives and performance measures for each of the four perspectives. Each performance measure is part of a cause-and-effect relationship involving a linkage from strategy formulation to financial outcomes. Measures of organizational learning and growth are assumed to be the drivers of the internal business processes. The measures of these processes are in turn assumed to be the drivers of measures of customer perspective, while these measures are the driver of the financial perspective. Measurements relating to the non-financial perspectives are assumed to be predictors of future financial performance.

- **Distinguish between lead and lag measures.**

Lag measures are outcome measures that mostly fall within the financial perspective and are the results of past actions. Lag measures generally do not incorporate the effect of decisions when they are made. Instead, they show the impact of the decisions as their impact materializes and this can be long after the decisions were made. Lead measures are generally non-financial measures that are the drivers of future financial performance.

- **Outline the benefits and criticisms of the balanced scorecard.**

A major benefit of the balanced scorecard is that it assists in communicating and implementing strategy throughout the organization by translating strategy into a coherent and linked set of understandable and measurable targets and performance. Criticisms relate to the cause-and-effect relationship and the absence of a time dimension. It is argued that the cause-and-effect relationships are merely hypotheses that are too ambiguous and lack a theoretical underpinning or empirical support. The time dimension presents a problem when there are differences in the timing of the effects of the various lead measures resulting in the outcomes occurring at different points in time. It is therefore difficult to determine the extent to which a particular lead indicator has had an impact on a lag measure.