CHAPTER 10 - Multidimensional performance management

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10.1 Introduction

Traditional performance measurement systems tended to focus on financial performance measurement, particularly measures of profitability and capital efficiency. The reporting focus was based on historical information that might indicate a problem but did little to help fix it or highlight the potential impact on future performance. By the time the measure was reported, it would be too late. The measure often ignored what lay behind the financial measures such as innovation, customer satisfaction, employee morale, the effectiveness of business processes, and where value was added or destroyed.

Academics such as Kaplan and Norton (1992), Lynch and Cross (1992), and Atkinson et al. (1997) noted that a range of performance indicators was required to capture the totality of perspectives and viewpoints on how well an organization is performing against its objectives. Organizations set the vision, mission, and objectives to address a range of stakeholder viewpoints, not all of which are satisfied by financial performance alone. Therefore it is necessary to monitor all aspects of the organization's performance.

This chapter looks at the use of multidimensional performance management to evaluate and monitor the effectiveness of strategies. It looks at ways of measuring divisional performance within large organizations and the issue of transfer pricing, where more than one division participates in providing the product or service to the end consumer. A review of benchmarking discusses how it facilitates improvements in performance and can aid the development of multidimensional monitoring.

Finally, in this section, as most performance management systems involve reviewing the performance of people, there can be some behavioral issues that need to be considered when establishing performance management systems.

10.2 Learning outcomes

After studying this chapter, you will be able to:

- Discuss the importance of establishing a multidimensional performance management system within an organization
- Understand the use of critical success factors in determining objectives and performance measures
- Evaluate the balanced scorecard as a performance management tool
- Discuss the different types of controls that can be used in performance management

- ➢ Critically evaluate methods of monitoring and comparing divisional performance including economic value added (EVA^{TM})
- ➢ Discuss the various methods of transfer pricing
- ➢ Critically evaluate benchmarking as a means of improving performance
- ➢ Discuss behavioral issues related to performance management and ways of overcoming them

10.3 A multidimensional approach to performance management

Traditional performance measurement tended to focus on financial, historical, and internal aspects of the performance. Multidimensional performance measurement systems encourage the inclusion of financial and nonfinancial, internal and external, and quantitative and qualitative measures.

10.3.1 A balanced scorecard

Active reading. Note the four perspectives suggested by Kaplan and Norton and the four elements of each perspective. Also, note the developmental aspect of the balanced scorecard in that targets should encourage improvement and initiatives to invite innovation. Also, note that as with any framework, there are benefits and drawbacks.

Video link Performance management and the concept of the balanced scorecard

https://www.youtube.com/watch?v=CR4oP_TOvqo

A framework known as the balanced scorecard was developed by Kaplan and Norton (1996) that enables organizations to think about performance monitoring from several different perspectives other than just financial. The organization's vision and mission are the heart of the framework, and thus all performance measures stem from what the organization is seeking to do in business terms. It provides a means to translate the vision and mission into a set of performance measures that facilitate the implementation of the organization's strategy. The interlinkages between performance measures can also be highlighted, which aids the understanding of the implications of new or revised strategies.

The four perspectives

The primary framework suggested includes viewing the organization from four main perspectives.

- Customer perspective (how do customers see us?)
- Internal business process perspective (what must we excel at?)

- Learning and growth perspective (how to improve and create value? How will we ensure that we are in business in the future?)
- Financial perspective (how do we look to our shareholders?)

Organizations are encouraged to design perspectives that suit their specific organization and should not feel restricted to the four perspectives noted above. For example, a supermarket may consider performance measures in the form of financial, customers, suppliers, operations (business processes), community, and learning and growth. The focus is to create a scorecard that monitors perspectives that are important to the achievement of strategy, and that includes financial and nonfinancial, internal and external focus, quantitative and qualitative, and short-term and long-term measures. The use of lagging (backward-looking) and leading (forward-looking) performance measures is also encouraged.

Other authors, such as Atkinson et al. (1997), suggest that a stakeholder approach can be taken. If an organization takes into account the stakeholders in making strategic decisions, and each stakeholder has different expectations, it follows that various measures of performance will need to be used to know that an organization is meeting these expectations. Each stakeholder will judge the success of the organization by different criteria.

Objectives and measures

Kaplan and Norton suggest that four elements can be considered under the various perspectives adopted.

- Objective or goal
- Measure
- Target
- Initiative

The objective should be derived from the organization's strategy. The measure is derived from the objectives and should provide the answer to the question — what needs to be measured to know whether the objective has been met? It is sometimes overcomplicated when, in practical terms, using the most straightforward measure is the most appropriate. Deciding the performance measures has implications for the information systems. The information needs to be available to measure the degree to which the objectives have been achieved. Creating a sophisticated form of measurement increases the costs associated with data collection and can result in managers not really understanding how the performance can be improved. The measure needs to aid the understanding of whether the strategy is working.

As a simple example, suppose an objective is to increase sales revenue. It can be measured by comparing sales revenue last year with sales revenue this year. The measure does not, however, indicate why the increase has happened. It could simply be because of price increases. But suppose the intention was to achieve this by increasing the customer base to attract and retain a higher number of customers. A nonfinancial measure of comparing the number of customers last year with the number of customers this year helps to determine this. However, increasing the number of customers does not necessarily mean that sales revenue will increase.

The sales revenue is also influenced by the volume of purchases made by each customer, so this could be linked to an objective and measure to increase the average spend by individual customers over that achieved last year. Sales revenue is also linked to customer satisfaction levels (a qualitative objective) and customer retention rates. The qualitative objectives also need to be quantified, for example, to increase customer satisfaction so that ninety-five percent of customers are happy this year.

The design process can be a valuable tool in gaining a thorough understanding of how the business works and actions that impact on more than one perspective. Kaplan and Norton were keen to stress that measures should link together and that the use of redundant measures that do not help the organization achieve its objectives should be avoided. It is, therefore, essential to understand the interlinkages between objectives and measures.

For example, suppose a supermarket has several checkouts that can be opened to service customers. During quiet periods, the supermarket does not want staff members occupying checkouts that are not being used, and conversely, in busy periods, a build-up of queuing customers is undesirable. Therefore, an objective may be to achieve optimum utilization of checkouts. This objective could be monitored by monitoring average queuing time at various times during the day, and the usage of checkouts. This impacts on customer satisfaction levels and possibly customer retention, as well as the utilization of staff. It has implications for the customer perspective and the business processes as well as staff training and employee morale. Hence there is a need to understand the interlinkages between the different perspectives, as shown in Figure 10.1. The process can be expanded to include all performance measures to create what Kaplan and Norton refer to as a strategy map.

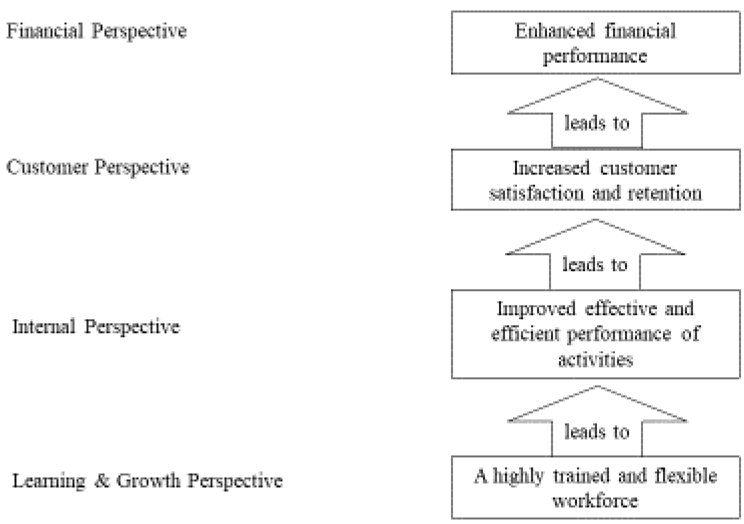

Figure 10.1 Linkages between scorecard perspectives

Targets can be used as a means of improving performance year on year and can form part of a performance management system at an individual level. Everyone in an organization has objectives, for which targets can be established.

The initiative provides the opportunity for the organization to ask, is there anything that can be done differently to aid the achievement of the objectives? It means that the balanced scorecard can be used as a developmental tool. It stops performance targets being rolled over each year without challenging the status quo.

10.3.2 Critical success factors and interlocking scorecards

Another concept that is important in performance measurement is identifying the critical success factors (Figure 10.2).

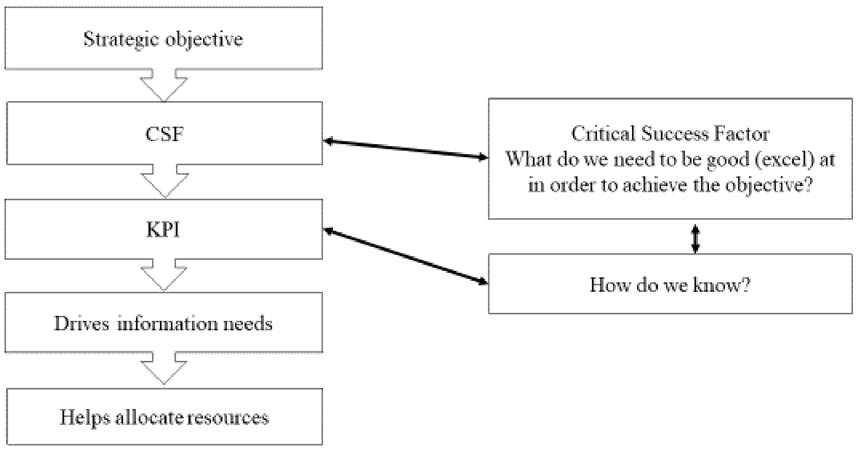

Figure 10.2 Critical success factor

A critical success factor is addressing the question, what does the organization need to be good at to achieve its objectives? The next logical question is, how does the organization know that it is good at what it needs to be good at? This helps to determine the key performance indicator that, in turn, helps to drive the information needs, that is, understanding the information required to monitor the achievement of strategy and, in turn, aids the allocation of resources to the areas of the business-critical for success. This process also ensures that the right aspects of the business are being measured and can stop information overload.

Developing the concept of critical success factors means that the senior management of an organization does not need to monitor every single performance measure but can focus on the critical success factors. This is because they delegate responsibility to lower levels of the organization for more detailed aspects of the business operations. These tiered levels of management can have their own balanced scorecard so, instead of one organizational scorecard that would be difficult to manage, a series of nested scorecards can be created and monitored at different levels of responsibility. The key is ensuring that employees at all levels are aware of how their role fits into the overall scheme of things. It is suggested that the balanced scorecard, and resultant strategy map indicating the linkages between the perspectives, can be used as a communication tool to ensure employees at all levels understand the organization's strategy and their role in its achievement.

There can be some difficulties with the balanced scorecard in that establishing too many measures can confuse managers, and the strategic focus can be lost. The behavioral implications of introducing a balanced scorecard also need to be considered as employees can become concerned when performance is being monitored closely. However, the process of introducing the approach should be inclusive and, if done with the involvement at all levels, can be positive in that all employees understand the organization's strategy.

10.3.3 Example of objectives and measures in a balanced scorecard

When using a balanced scorecard approach, the perspectives need to be tailored to the organization. The Royal Botanical Gardens Kew, London, is an organization that raises most of its funds from philanthropic donations, commercial ventures, and entry fees. The charity The Foundation and Friends of the Royal Botanic Gardens Kew support the organization from fundraising activities, but RBG Kew also receives government grants to support its work. Located toward the edge of the city, the Gardens are regularly visited throughout the year by many local families and are an internationally well-known tourist attraction.

Despite charging admission, it is one of the top five visitor attractions in the country. Every year it answers many thousands of inquiries from Universities and research establishments, including pharmaceutical companies from all over the world and charges for advice and access to its collection. Inquiries can range from access to the plant collection for horticultural work, seeds for propagation, or samples for chemical analysis to seek novel pharmaceutical compounds for commercial exploitation. There is also a thriving education program that provides a range of educational services promoting horticulture. It is also possible to hire the use of the facilities for occasions, such as weddings and other events, such as conferences and so on.

The Key strategy document for 2020/21 published on the website states (https://www.kew.org/sites/default/files/2019-03/corporate-strategy-0417_0.pdf):

> Royal Botanic Gardens, Kew's mission is to be the global resource for plant and fungal knowledge, building an understanding of the world's plants and fungi upon which all our lives depend. We use the power of our science and the rich diversity of our gardens and collections to provide knowledge, inspiration and understanding of why plants and fungi matter to everyone. We want a world where plants and fungi are understood, valued and conserved – because all our lives depend on them.
>
> The 2020/21 document includes the following priorities initiatives:

1. Delivering the Science Strategy and curating the collections
2. Maximizing the potential of the gardens
3. Growing commercial income
4. Creating outstanding learning and outreach propositions
5. Engaging the public and key stakeholders in RBG Kew's importance and impact
6. Growing philanthropic support and Friends income
7. Achieving success through our people
8. Improving the built and technological infrastructure

The following objectives and performance measures illustrate how the scorecard can be tailored to the individual organization. Targets are not provided, but the management teams would set sensible, achievable targets. The objectives and target together make the objectives SMART (specific, measurable, agreed, realistic, and time-bound) in that the target would quantify the objective. Initiatives would also be developed that would help the achievement of the objectives.

The illustration uses five perspectives: scientific and conservation community perspective (customer), public amenity and education perspective (a different customer), internal perspective including own research projects, learning and growth, and the financial perspective.

Note how simply some of the measures are expressed and that some objectives have more than one measure that helps to assess if the objective has been achieved. There is often a tendency to make the measures too complicated when simple is best. It is also possible, and often desirable, to break the objectives down into smaller objectives targeted at specific areas of the business with managers who have particular responsibilities in the form of nested scorecards.

Table 10.1 illustrates the type of performance measures that could be used for the Royal Botanical Gardens – Kew.

Table 10.1 – Objectives and performance measures suitable for the RBG – Kew.

Potential objectives	**Performance measures**
Scientific and conservation community perspective (Customer)	
To increase the number of publications in high-quality journals	Number of papers published/presented at conferences
To provide an improved service to the scientific community	• Number of enquires successfully answered • Number of new projects supported • Number of completed projects • Number of new species successfully identified and cataloged. (As this depends on the new species discovered, it

	might be better to use a success rate such as 100% of new species presented for classification successfully cataloged.) • Number of days to update new species into manuals for plant identification
To improve access to collections	• Number of online inquiries, live visits
Public amenity and education perspective (a different customer)	
To increase the number of public visitations	• Number of visitors to gardens and educational events
To increase the number of students undertaking a formal course of study	• Number of new students • Number of successfully completed courses • Number of new courses offered • Number of attendees on training days for teachers and study days for children.
Internal perspective including own research projects	
To undertake scientific research projects that aid plant conservation	• Number of research projects undertaken, successfully completed, written up, and published.
To increase the number of items in the collections	• Number of items added to collections in the year. By collection and by plant type • Number of endangered species saved or reintroduced successfully to natural habitats during the year. (note: definition of "saved" is required to make this measurable, i.e., may be measured over five years). • Number of species transferred to other botanical centers to ensure the preservation
To increase the volume of literature held for use by researchers (internal and external)	• Number of items held in the library.
To improve the level of service from support functions during the year	• Response times to request for support • Activities completed that relied on support activity, e.g., educational program launch. • Number of events catered for / revenue raised from catered events
To increase the accessibility of collections	• Number of collections accessible by scientific community/public

To retain staff employees and volunteers	• Staff and volunteer retention rate
Learning and Growth	
To increase the number of international partnerships	• Number of new partnerships by geographic location, number of lost or dissolved partnerships • Volume of activity between partnerships conducted during the year (exchange visits, or other activities as appropriate)
To improve the effectiveness of communications to attract visitors, donations, etc.	• Number of new media outlets introduced in the year • Number of hits on web sites by page/area • Number of people aware of the work of the RBG – Kew
To achieve 100% capacity utilization of training facilities during the year	• % Capacity usage of the training facility
To increase the number of collections that are available digitally	• Number of collections digitally cataloged.
Improve training of staff	• No of effective training days achieved
To attract new researchers to work with the RBG – Kew	• Number of new researchers /collaborations in year
Financial perspective	
To operate on a financially sustainable basis	• Expenditure report and surplus/deficit in the year
To increase revenue from sources other than the government grant	• Number of successful events held • Number of hiring's • Revenue generated from items sold through retailing • Number of new recruits to the Foundation and Friends RBG - Kew • Number and size of donations from individuals and corporate

A draft strategy map is shown in Figure 10.3. The map would be refined via discussion and testing to make sure that all the measures aided the achievement of the strategy.

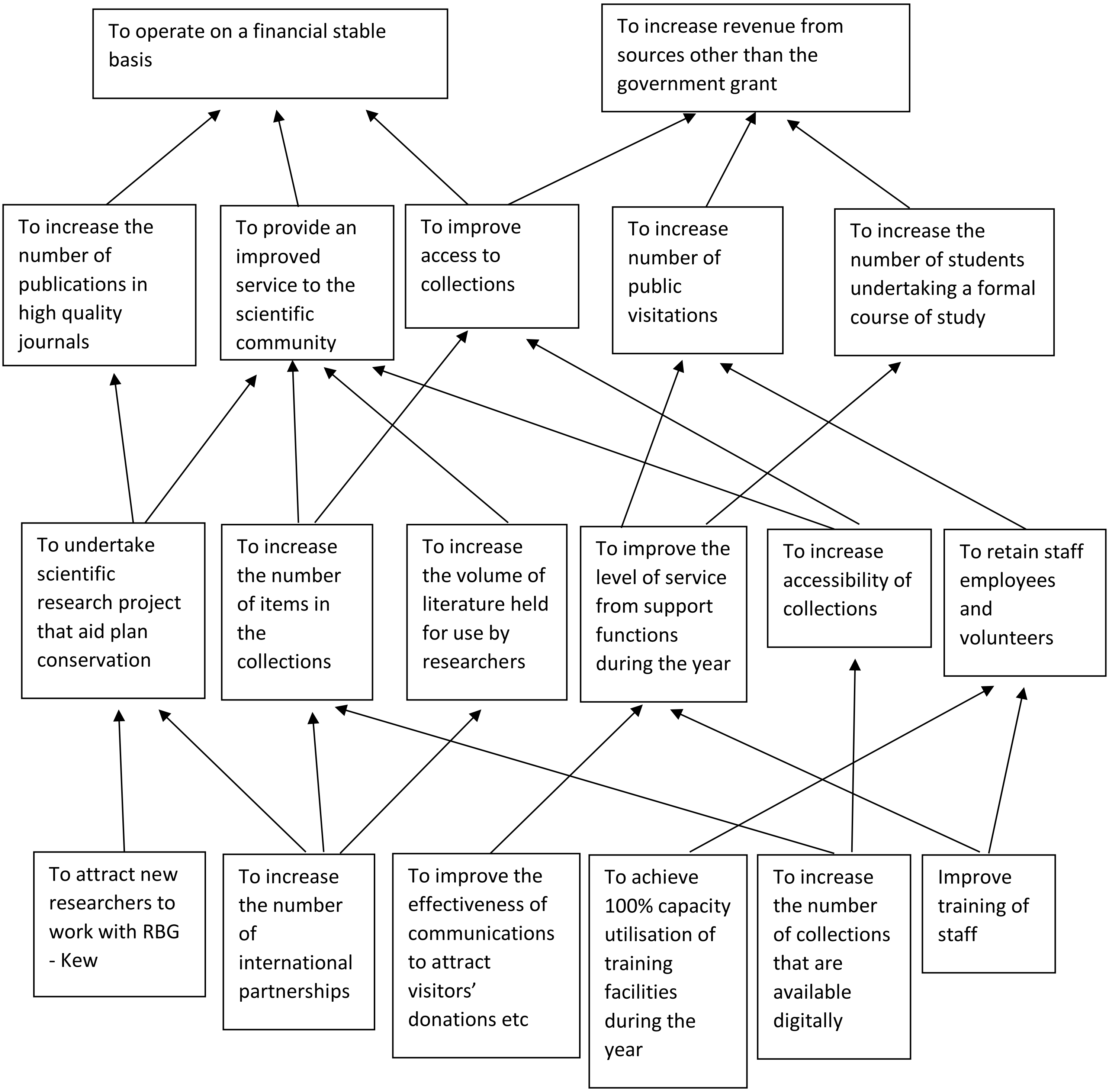

Figure 10.3 Draft strategy map for RBG Kew

Learning activity. Think of an organization with which you are familiar and construct a balanced scorecard with at least two objectives in each perspective, and associated performance measures. Do not feel obliged only to use the four perspectives suggested by Kaplan and Norton if you think that different perspectives are important.

10.4 Performance management in service organizations

Active reading. Note that financial performance is the result of the strategy. It is the determinants where action is required.

An approach for performance measurement in service sector organizations was put forward by Fitzgerald et al. (1991) and highlights that the traditional approach of monitoring only the financial perspective is in danger of focusing on the results and ignoring the determinants. The multidimensional approach to avoid this is shown in Figure 10.4.

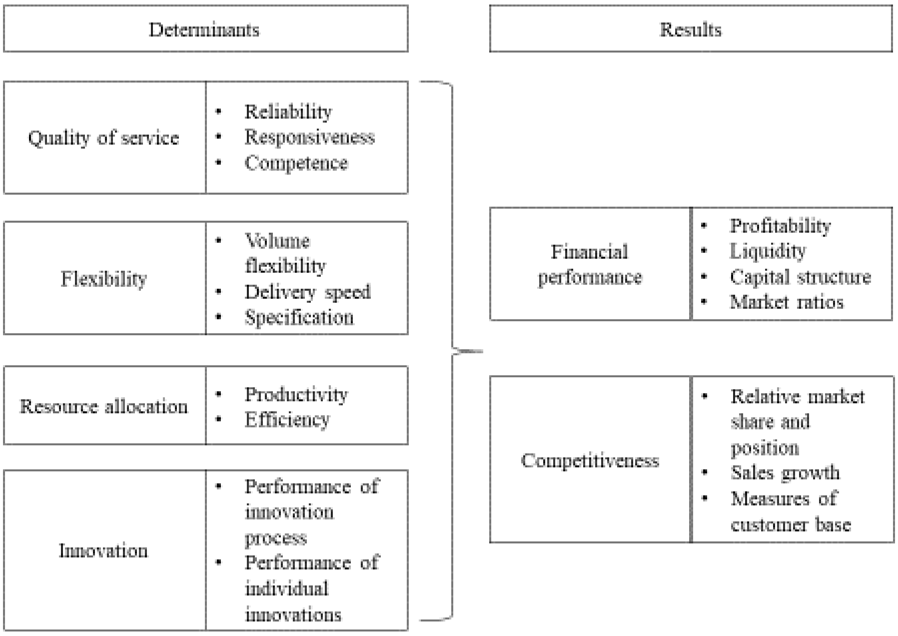

Figure 10.4 Multidimensional approach to performance management for service organizations

The secret to performance measurement is to gain an understanding of what determines success. The understanding can be built up over a period via the use of a range of multidimensional measures. Performance measurement, however, is only part of the broader concept of performance management. Therefore, for the measurement to mean anything, the results must inform management such that it stimulates appropriate actions.

10.5 Simons' levers of control

Active reading. Note that the financial controls, such as budgetary control, would fall within the diagnostic category. Beyond budgeting, however, might include elements of interactive controls.

Simons' (1994) levers of control are often used as a framework for categorizing the type of controls that an organization can use.

- Diagnostic use of control systems—ex-post monitoring, corrective action, and management by expectations
- Interactive use of control systems—frequent use and dialog to stimulate organizational learning and change, for example, meetings and briefing sessions
- Belief systems—communication of core values related to sustainability to trigger a change in mindset and support organizational change processes (for example, mission statements)
- Boundary systems—restraining organizational members from entering in an extreme zone (for example, code of conducts, anti-bribery guidelines)

In practice, an organization will use a range of controls. However, due to its culture, it might use a predominance of one of these; for example, a highly controlled bureaucratic organization might use the prevalence of diagnostic controls. In contrast, an organization run as a meritocracy that gives employees more autonomy, and encourages an open exchange of information and ideas, might use a predominance of interactive and belief controls. Therefore, the culture of the organization, as well as the strategy, has an impact on the type of controls that would be adopted. This tailoring of control implies that the design of management accounting systems can help to support and develop the culture of the organization.

10.6 Divisional performance

Active reading. Note that the comparison between divisions is not just about financial performance.

When an organization is structured in a way that has divisions or subsidiaries, it is useful to be able to set targets and monitor the performance of each division separately and, if sensible, to make comparisons. When comparing divisional performance, it is essential to make sure that the comparison is meaningful and that other factors are considered. For example, two divisions undertaking the same activity, but operating in different countries, may perform differently, due to the economic conditions prevailing in their market, such as the U.S. economy performing differently to Asian economies. Therefore, differences in performance are not just due to management performance. This emphasizes the importance of monitoring external environmental PESTEL factors and how they impact on different markets and the significance of comparing performance against competitors in the same market.

10.6.1 Levels of performance monitoring of business units

Active reading. Note that it is possible to use a mix of approaches for certain cost elements.

Organizations can be divided into strategic business units or operating/functional units for the purposes of monitoring performance. Typically, functional units are treated as cost centers in which costs are allocated to the functional units and monitored against a cost budget. If the organization can identify business units to which revenue streams and costs can be meaningfully allocated, they can be treated as profit centers. In this case, a series of profitability ratios could be used as financial performance indicators, for example, operating profit percentage. In cases where it is possible to allocate capital items, such as plant and equipment, buildings, and so on, the business units can be monitored as investment centers. Suitable financial performance indicators, in this case, might be return on investment.

In all cases, costs, revenues, and capital items need to be allocated on a meaningful basis; otherwise, the monitoring is not helpful. It is also essential to be able to monitor and report those costs that are controllable by the manager responsible for the business unit or cost unit. Apportioning costs such as central marketing costs can create time-consuming discussions and wasted resources if managers feel they are being penalized for something outside of their control.

The preferred approach is to strike a line at a controllable profit, or cost, and then show apportioned costs separately below the controllable line. This style of reporting enables managers to take ownership of their area of responsibility. Still, it keeps in front of them the fact that the unit benefits from decisions that are made centrally, such as central marketing. And that they are expected to contribute to the cost of providing those central activities.

The reporting of central services costs becomes significant when these types of costs are allocated to business units. For example, consider the use of a central I.T. function in organizations.

If a central I.T. function is treated as a cost center and costs are not charged out to users, it can encourage users to request more and more services, as there is no cost to the user. However, if charges are made to divisions at the cost of provision, based on usage, business units are aware that I.T. services cost money and are more prudent and careful in their requests. They may well undertake a cost-benefit analysis before requesting additional I.T. services. Indeed, the head office may require a business case to be made before any additional investment is made. A further step could be made, and the I.T. function makes a charge to divisions based on a market rate. This allows the I.T. function to operate as a business unit in its own right, which can result in I.T. staff being keen to “sell” services to divisions and actively seek out areas where they can assist. Therefore, there is a motivational aspect of the I.T. function derived from the approach taken to charging internal services.

One way of establishing a market rate is to investigate what it would cost the organization to outsource its I.T. function. By investigating this, it sets an external benchmark against which the I.T. function can be measured, and in some instances, it may be more efficient to outsource some of the essential I.T. functions. There are, however, strategic aspects here such as loss of control, confidentiality, and so on that need to be considered, again illustrating that cost is not the only consideration. This idea can take an extra dimension in that large organizations may decide that divisions can buy certain I.T. services from external providers; that is, they do not have to use the central I.T. function. This approach can add a degree of competitiveness to the I.T. function in that it encourages efficiency and effectiveness within the in-house service.

A possibility is that a function such as I.T. provision lends itself to a hybrid style of cost allocation. The provision of an organization-wide network is a decision that benefits the whole organization and is treated as a central “head office” cost. The costs of I.T. that are directly attributable to a business unit can be charged at cost to the units, for example, computers used by the business units become their assets, with the subsequent depreciation charges, maintenance (even if managed by the central I.T. function) and so on. Additional bespoke services required by divisions are charged at a market rate. The design of such a cost allocation system can ensure that a service function such as I.T. is contributing to the overall strategy of the organization.

10.6.2 Return on investment (ROI) and residual income (R.I.)

Active reading: Note the behavioral implications of comparing divisions.

Two conventional methods of monitoring divisional performance are, return on investment (ROI) and residual income (R.I.).

The return on investment is typically calculated as:

$$\frac{Divisional\ profit\ before\ interest\ and\ tax\ (operating\ profit)}{Investment\ in\ the\ division}\ x\ 100 = \%$$

ROI is frequently used to compare divisional performance. However, it is important to compare performance against external benchmarks if available.

For example, economic performance is as much an issue as is managerial performance. If a division in Hong Kong is making a 25 percent ROI, yet the division in the U.S. is making a loss of 3 percent, does it mean that the management team of the division in Hong Kong is better? Apart from the fact that divisions may be operating in different sectors, competitor organizations in Hong Kong may be making 30 percent ROI, in which case the Hong Kong division is not doing as well as it should. Or if the competition in the U.S. is losing 5 percent, then the U.S. division is doing quite well.

The external comparison underlines the fact that external information, particularly of competitors, needs to be considered when making judgments about the managerial performance of divisions. It also highlights the need to set targets with external reference points rather than taking a purely internal viewpoint. Senior managers often focus on poorly performing divisions when, at times, they need to be pushing divisions that are meeting organizational targets if they are still below the competition.

The residual income is typically calculated, as shown in Table 10.2.

Table 10.2 Calculation of residual income

	$
Divisional profit before interest and tax (operating profit)	x
Less a charge for the use of capital (notional interest)	(x)
Residual income	X

One aspect to note is that residual income is usually expressed as an absolute figure and is positive or negative. It is useful as a performance measure when the head office primarily controls the investment in the division. In some instances, this is said to be a better measure to use when considering further investments as it can reduce some of the behavioral implications of the ROI measure.

Suppose a division has achieved an ROI of 20 percent, beating the target set by the head office of 15 percent. The management team, who are keen to demonstrate continued high performance, may be reluctant to undertake a project that yields 17.5 percent. Although it is above the head office target if the division undertakes the project, it will reduce its average ROI to below 20 percent, and make the division look as if its performance has declined. Therefore, there is a dysfunctional or motivational aspect of ROI.

As RI is an absolute figure, if a project increases R.I. by $100,000 then, all other things being equal, the management would be more motivated to undertake the project. R.I. uses the concept of net present value (section 8.5) and is said to have the same properties in decision making, that is, a favorable outcome encourages acceptance, whereas a negative result discourages acceptance. The fact, however, that R.I. is often reported as an absolute figure can be a problem. For example, increasing profit by $1,000 sounds good, but if it requires an investment of $10,000,000, it is maybe not so good. It is, therefore, helpful to express R.I. as both an absolute figure and a percentage of the investment.

Learning activity.
Division X has the opportunity to undertake a project which will require an investment of $150,000 and yield a profit of $25,000. The parent company, XYZ Inc., sets a target return on investment of 12%, which is 2% above its cost of capital. Division X has, in recent years, achieved an ROI of 20%.
Calculate the ROI and R.I. of the project opportunity and advise whether the project should be undertaken.

A solution to the numerical element:
ROI

$$\frac{\$25{,}000}{\$150{,}000}\ x\ 100 = 16.67\%$$

RI

$Cost\ of\ captial: 12\% - 2\% = 10\%$

$Capital\ charge: 150{,}000\ x\ 10\% = 15{,}000$

$Residual\ income: \$25{,}000 - \$15{,}000 = \$10{,}000$

10.7 Economic value added

Active reading. Note the similarity to R.I., but also the rationale for adjusting the traditional profit or loss reported.

Economic value added (EVA™) was developed by a firm of consultants (Stern Stewart & Co., now Stern Value Management) as a means of measuring organizational performance. The economic value is the net operating profit after tax from which a deduction is made for the use of capital in the form of a capital charge, based on the weighted average cost of capital (WACC), to arrive at the economic value, shown in Table 10.3.

Table 10.3 Calculation of economic value added

	$
Adjusted profits to arrive at net operating profits after tax	x
Capital charge (adjusted capital employed x weighted average cost of capital)	(x)
Economic value added	x

It is an absolute value, that is, a number rather than a percentage, and in a similar way to R.I., if used as an investment appraisal method, would encourage managers to undertake an investment if it increased the economic value added. In this way, it is said to be a good measure as it encourages managers to make decisions based on the interests of the shareholders and the organization.

Stern Stewart recommended that adjustments should be made to the financial accounting profit to derive an adjusted net operating profit. The typical adjustments include adding back noncash items and accounting adjustments, such as depreciation. This adjustment is made to arrive at a figure that is closer to cash generated. Other typical adjustments include research and development, marketing, and training. The underlying justification for adjusting these items is that they are an investment in generating future revenue streams rather than a charge against profits in the year in which they are incurred.

An adjustment is made to treat these items as investments, and therefore, added to the balance sheet. They are then written off over the period for which they are deemed to be generating revenue and, hopefully, profits. For example, a marketing campaign, particularly in the case of a new product, or indeed the research and new product development costs, may generate profits over a more extended period than one year. Therefore, it would seem logical that the associated costs should be written off over the same period to which they contribute to profits. EVA™ can be a difficult concept for nonfinance managers to understand the significance of the adjustments, therefore in practical terms, adjustments are made if:

- It is likely to have a material impact on EVA™
- Managers can influence the outcome
- The operating people can readily understand it
- The required information is relatively easy to track or derive

Example of EVA

Yana Pasclovichski, the financial director of Alarm Inc., is currently looking at the performance of the company and has been exploring Economic Value Added (EVA™) as proposed by the consulting firm, Stern Stewart, as a possible way of aiding strategic decision making as to which areas of the business to develop in the future. Alarm Inc. has three divisions that serve different customer groupings.

Yana has provided the figures and information shown in Table 10.4.

Table 10.4 Information extracted from financial accounts

	Industrial & Commerce	Public sector (State-owned)	Residential (including property developers)	Company Total
	$,000s	$,000s	$,000s	$,000s
Net operating profit before interest and taxation (per financial accounts)	2,300	1,800	400	4,500
Net interest payable	220	200	80	500
Taxation paid on ordinary activities	420	250	80	750
Net operating assets (Book value)	8,000	5,000	7,000	20,000
Costs already accounted for in arriving at the net operating profit above				
Depreciation	300	700	200	1,200
Research and Development	500			500
Marketing	1,000	600	400	2,000
Training	600	400	200	1,200

Notes:

- Assume the taxation shown represents tax paid
- Research and Development relates only to the Industrial & Commercial division
- Research and Developments costs are to be written off over 3 years
- Marketing expenditure should be written off over 2 years.
- Training costs will continue to be written off in the year in which it is incurred
- The weighted cost of capital has been estimated to be 10%

Using the information provided by Yana Pasclovichski, restate the results of Alarm Inc. to show the EVA of each division.

The results of the restatement are shown in Table 10.5

Table 10.5 EVA for the three divisions

EVA	Industrial & Commerce	Public sector (State-owned)	Residential (including property developers)	Company Total
Suggested solution	$,000s	$,000s	$,000s	$,000s
PBIT	2,300	1,800	400	4,500
Add back depreciation	300	700	200	1,200
R & D Add back this year	500			500
R & D write off 1/3 this year	(167)			(167)
Marketing Add back this year	1,000	600	400	2,000
Marketing Write off 1/2 this year	(500)	(300)	(200)	(1,000)
Training - no adjustment required				0
Adjusted profit	3,433	2,800	800	7,033
Taxation	(420)	(250)	(80)	(750)
NOPAT	3,013	2,550	720	6,283
Capital charge	(913)	(600)	(740)	(2,253)
EVA	2,100	1,950	(20)	4,030
EVA as percentage of adjusted net assets (capital employed)	23%	33%	0%	18%
Balance sheet elements				
Net Operating Assets	8,000	5,000	7,000	20,000
Add back depreciation	300	700	200	1,200
2/3rd R & D carried forward	333			333
1/2 marketing carried forward	500	300	200	1,000
Adjusted net operating assets	9,133	6,000	7,400	22,533
Capital charge at 10%	913	600	740	2,253
ROI for comparison (PBIT/cap employed)	29%	36%	6%	23%

The figures shown in Table 10.5 adopts the approach to the adjustments of first adding back the item as if it had not been deducted from profits, then writing off the appropriate element under the principle of EVA. The same effect can be achieved by showing the net impact of these adjustments.

The analysis indicates that residential customers are destroying value (which is a strong statement). In contrast, the public sector customers appear to be adding the highest value (in relative terms – 33%) to the business. This is a different picture to that shown by the traditional profit and loss statement. It should be noted that this is only one period, and ideally, previous periods should be restated before any firm conclusion can be drawn. Still, the analysis might redirect management's attention to different areas of the business when developing strategies.

10.7.1 Benefits and drawbacks of EVA™

Active reading: Note the reference to shareholder value. Think about whether this conforms to a stakeholder approach, or are the two approaches compatible?

EVA™ is said to have several uses that may be of interest to an organization. For example, it can be used to set organizational goals and, therefore, could feature as a performance measure and target on a balanced scorecard. It can be used to determine bonuses at a divisional and whole organizational level and maybe a way of motivating managers to increase economic value and hence shareholder value. It can also be used to value companies and determine equity investments by focusing on the value-added potential of the organization.

EVA™ also introduces an element of accountability to divisional managers for investment decisions that benefit the company in the long term. This approach encourages managers to think about long-term issues rather than attempting a short-term fix. It also makes managers think along the lines of shareholders in terms of adding value to the business.

However, as with most techniques, there are some issues that an organization needs to be aware of if thinking of using EVA™ as a performance measure. It is complex, and managers who do not have a financial background can also find it challenging to understand. Therefore there will be a requirement for training and support at all levels in the organization. As it is a single financial measure, it is best used as part of a multidimensional approach to performance management.

There is also a high degree of subjectivity in estimating the length of time that items such as research and development, marketing, and training continue to generate revenue streams and, therefore, the period over which they should be written off.

10.7.2 Key factors to consider when implementing EVA™

Active reading: Think about the role of the accountant if EVA is implemented.

Some key factors can be considered when implementing EVA™ as a key driver for performance management.

- It is essential to ensure that everyone in the organization understands the concept of economic value added and that there is an agreement on the definition of organizational success.
- The overall strategy may need reformulating to focus on adding value with a resultant review of strategic direction and priorities.
- The cost of capital needs to be calculated, and, in some instances, this can be a useful exercise for an organization. Often organizations are not aware of their cost of capital and, therefore, no real view as to the level of profit required to satisfy the capital providers who may be considered a significant stakeholder in many decisions.
- The use of external benchmarks is encouraged, which can benefit the organization by providing the incentive to improve.
- It can be used as targets for key employees, and indeed all employees, in viewing how they can add value. It can also be linked to a reward system.
- Introducing EVA™ may well involve a cultural change to focus employees on thinking about value-added, not just to shareholders but to stakeholders.
- There could be implications for the accounting system in that it will need to be adapted toward highlighting economic value added. It may, in some instances, require investment in information systems. To facilitate the use of EVA™ reporting, it is essential to avoid accounting complexity and keep it simple. There may also be a significant amount of training to undertake for managers to enable them to understand the concept fully.
- The value drivers need to be identified so that they become the focus of strategy and that the budgeting and strategic plans are fully integrated toward EVA™.

10.8 The issue of transfer pricing in divisional performance

Active reading: Note the different levels at which transfer prices can be established. Think about the implications for the motivation of managers and the perceived fairness of the system adopted.

The rationale behind transfer pricing is to identify where value is added within the internal value system, to aid the monitoring of divisional performance, and to assist managers with decision making that maximizes the economic benefit for the organization. Setting transfer prices that encourage efficient internal trading can be a crucial part of implementing a successful strategy and extracting the maximum value for the customer. It can have motivational implications for the managers of business units, particularly across international borders, and encourage goal congruency and the achievement of the overall strategy.

The need for transfer pricing typically occurs in situations where Division A manufactures a product that is used in a product or service offered by Division B. This can have an added dimension if there is an external market for the product manufactured by Division A. Figure 10.5 illustrates the dilemma of transfer pricing.

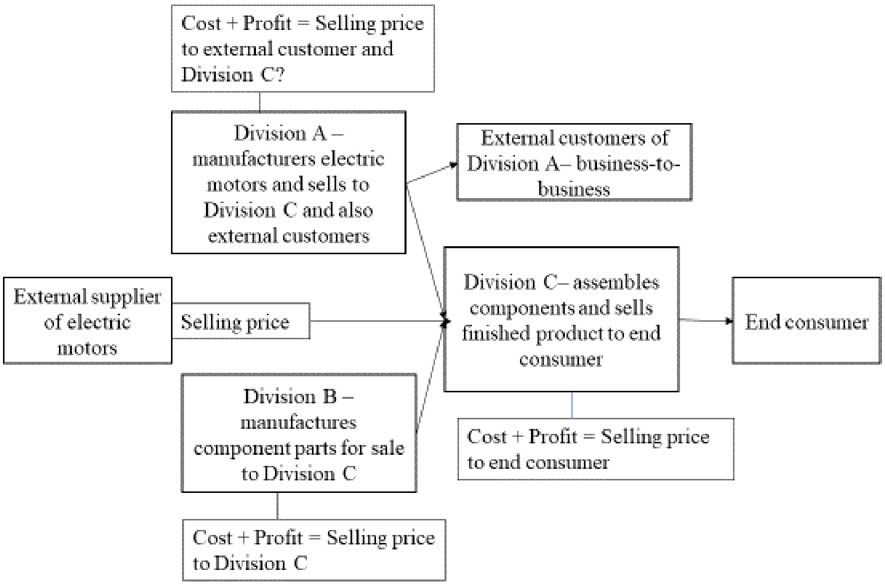

Figure 10.5 – the transfer pricing dilemma

For example, an organization consists of three divisions. Division A produces an electric motor that it sells on the open market, but is also a component of the vacuum cleaner manufactured by Division C. There are also alternative motors on the open market that could be used by Division C. What price would encourage Division A to sell to Division C and motivate Division C to buy from Division A instead of buying from an external source? If Division A sells all its production to Division C, it loses the opportunity to sell to external markets. Should it charge the same price to Division C as it does to its external customers?

Division C also uses components that are manufactured by Division B. These components are only produced for internal use within the organization, and Division B does not sell to external customers. As this is purely an internal transfer within the company, should this be made a cost value, or should Division B be allowed to make a profit? As the transfer price from Division A and Division B represents a cost to Division C, the choice of transfer price could potentially affect the end price to the consumer and hence the profits of Division C. Transfer pricing can have a significant impact on divisional performance monitoring which is why managers often challenge and wish to negotiate the transfer price.

Figure 10.6 indicates the underlying cost structure and transfer price options for a product manufactured in Division A and transferred (sold) to Division C.

	$	$
Materials	X	
Labor	X	
Direct (marginal) cost		X
Add manufacturing overheads	X	
Full manufacturing cost		X
Add delivery costs	X	
Add sales & marketing costs	X	
Add administration costs	X	
Total cost		X
Profit margin		X
Sales price		X

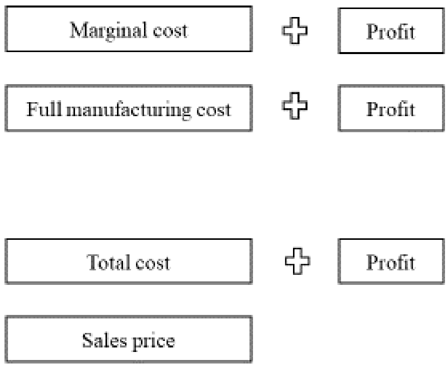

Figure 10.6 Basic cost structure and transfer price options

10.8.1 Options for transfer pricing

Marginal cost

In this instance, Division A recovers the direct (marginal) costs of manufacturing the product but is left with the manufacturing overhead. Division C would be more than happy to buy motors from Division A at this price.

Marginal cost plus

It could be argued that it is not fair on Division A just to receive the marginal cost, and leave it bearing all the fixed cost. Hence it could be decided to transfer the motors at marginal cost plus a percentage mark-up to provide an incentive and contribution toward the fixed cost. If this transfer price is less than the price of other motors available in the open market, Division C will be happy to buy from Division A.

Full manufacturing cost

Another method might be to transfer at full manufacturing cost. This enables Division A to recover the fixed costs of manufacturing. It is better to calculate the transfer price using a standard (or budgeted) cost as if actual costs are transferred; it does not encourage efficiency in Division A. Transferring the motor at actual cost means any inefficiency is transferred to Division C.

Full manufacturing cost plus

It is also possible to add a mark-up to the full manufacturing cost. Again, if this is less than the price of a competitor motor in the open market, it will still be beneficial to keep the business within the company and motivate Division C to buy from Division A.

Full market price

Another method is the use of market price. If, however, Division C could buy a product at a lower price on the open market, it might not be motivated to buy from Division A. Of course, the head office could insist that Division C uses Division A's motor and not allow it to buy on the open market. This policy, however, may demotivate Division C and create tension between divisions when, ideally, the divisions need to work together.

Adjusted market price

An argument could be made that if Division A sells to Division C, it saves on the direct selling costs; that is, it is an easy sale and could save on distribution costs. The market price could be adjusted, that is, reduced by the savings made on selling and distribution costs.

Negotiated prices

An alternative might be to allow divisional managers to negotiate a price between themselves. This process could, however, take time and be detrimental to the business if decisions are needed quickly, in which case, a policy that determines the price according to a prescribed basis is more beneficial.

All the above assume that Division A has spare capacity and can satisfy external customer demand and the requirement from Division C. However, as soon as Division A has limited capacity, and has a choice to make as to whether it sells to Division C or an external customer, the decision process changes. This is because in the situation of limited capacity, if a motor is sold to Division C, then Division A loses the opportunity to sell to an external customer. It raises the issue of a lost opportunity to sell at full market price to an external customer.

Opportunity cost

When Division A has spare capacity, the opportunity cost of producing one extra unit is the marginal cost, as this is the only additional cost to Division A of producing the extra unit. When, however, there is no spare capacity, Division A loses the contribution it would earn from selling to an external customer, on top of the marginal costs incurred. Therefore, the opportunity cost is the marginal cost plus the lost contribution. If Division A makes the transfer to Division C, the organization loses the contribution from the external customer, and therefore the preferred option is to sell externally. The only exception to this is where Division C can add more value to the motor as part of its product than Division A can generate in the open market for the motor on its own. The use of the opportunity cost enables the decision to be made based on the benefit to the organization.

Learning activity.

Division X manufactures and sells electric motors. The units can be sold in the open market for $150. They are also transferred to Division Y, which uses the units as a component in one of their products.

The following information has been extracted from the accounts of Division X.

	$000
Sales Revenue (100,000 units at $150.00 each)	**15,000**
Direct Manufacturing Costs	
Bought-in materials	4,500
Labor	2,875
Packaging	500
Indirect Manufacturing Costs	
Variable overheads	125
Line production managers	375
Depreciation	
Capital equipment	1,875
Capitalised development costs	750
Total manufacturing costs	**11,000**
Sales and Distribution Costs	
Salaries of sales force	625
Carriage	250
General Overhead	625
Total costs	12,500
Profit	**2,500**

Notes

1 The costs of the sales force and indirect production staff are not expected to increase up to the current production capacity.

2 Depreciation for all assets is charged on a straight line basis using a five year life and no residual value.

3 Carriage is provided by an outside contractor.

Activity requirement:

Calculate potential transfer prices for the electric motors if they are transferred at:

1. Variable production cost plus a mark-up of 10%
2. Full manufacturing costs plus a mark-up of 10%
3. Adjusted market price

Solution
Variable production cost plus a mark-up of 10%

$$\frac{(4{,}500 + 2{,}875 + 500 + 125)}{100}\ X\ 1.1 = \$88$$

Full manufacturing cost plus a mark-up of 10%

$$\frac{11{,}000}{100}\, x\ 1.1 = \$121$$

Adjusted market price

$$150 - \left(\frac{250}{100}\right) = 147.50$$

Note: it is assumed that carriage is variable, and the cost only incurred if an external sale is made.

10.8.2 Transfer pricing across international borders

Active reading. Note that when transferring across borders, there is a range of factors that need to be considered. It is often not as straightforward as it might seem.

When transferring products or services across international borders, other factors should also be considered, such as:

Tax regimes

Different tax regimes and the view of local tax authorities to cross-border transfers need to be considered, for example, rules on allowable costs to be transferred. Transfer prices should not be set to avoid tax as there is a legal and ethical argument that states organizations should pay their fair share of taxes if they are enjoying the benefits of local resources. There is, however, the opportunity to consider the configuration of global operations of an organization, that is, where different elements, such as production, are undertaken in overseas locations to reduce the overall tax charge incurred by a global organization.

Ethical considerations

The transfer price should be justifiable, and hence ethically calculated, and not just used to transfer profits between countries. However, there may well be an element of tax management within the decision.

Competitiveness

The degree of competitiveness of the overseas market needs to be considered; for example, the transfer price should not make the offshore unit uncompetitive by charging a high transfer price.

Motivation

The motivational aspect of transfer pricing also needs due consideration. Linked to the point above, local managers should feel that the price is fair and not just calculated for the benefit of a tax management policy by head office or political considerations.

Customers

The view of customers should be considered in that some may feel the organization inflates the price for no real reason, other than to make profits in an overseas location, that is, consumers are becoming suspicious. Customers in some markets are skeptical of foreign organizations charging higher prices in different markets. The recent tax avoidance scandals have heightened consumer awareness of transfer pricing issues, and therefore the likely response of consumers should be taken into consideration.

Local suppliers

The degree to which there are local suppliers of products that could supply the same product at a lower cost will affect the transfer pricing decision. In this instance, the differentiation and quality control aspects of the product could be a key factor in justifying a higher price than that available in the local market.

Currency risk

The currency in which the transfer is made, that is, who bears the foreign exchange risk. If the overseas receiving division carries the risk, this could make profits fluctuate for no controllable reason. The performance management of offshore locations needs to take account of economic and managerial performance. For example, in some markets, it may be that it is not management actions that are generating higher profits, but the economic conditions. Therefore, external benchmarks need to be made with other companies in the same sector in the same overseas market.

10.9 Benchmarking

Active reading: Note that benchmarking is a learning exercise, not a copying exercise.

Video link [Benchmarking](https://www.youtube.com/watch?v=1WklEK9zwyU)

[https://www.youtube.com/watch?v=1WklEK9zwyU]

Benchmarking is a means of comparing the performance of an organization (or individual or subgroup) with another with the aim of learning and making improvements. Whether following a strategy of cost leadership or differentiation, making continuous improvements to reduce costs or enhance the elements of differentiation can contribute to the sustainability of the competitive strategy, and hence the strategic management process. It is important to note that it is not just a copying exercise, as the context in which the improvements are being implemented needs to be considered. For example, if the management of an organization were to benchmark performance against a much larger competitor, the competitor may enjoy economies of scale that the organization will not be able to match. So, just copying the practices of others may not yield any benefit unless it is tailored to the organization's particular situation.

10.9.1 Uses and benefits of benchmarking

Active reading: Think of other techniques and models where benchmarking can contribute, such as generating initiatives in the balanced scorecard perspectives, lean accounting, improving the value creation systems, divisional performance, and so on.

Benchmarking can also be used as a means of developing new initiatives that can be implemented as part of a balanced scorecard approach to performance management. Also, concerning competitors, it can aid the determination of strengths and weaknesses as part of the corporate appraisal or SWOT analysis. Therefore, the process and outputs of benchmarking exercises can be used in conjunction with other techniques to aid the development of strategy and the achievement of objectives.

One of the key advantages of benchmarking is that it can aid in setting aspirational targets that are linked to strategy, particularly if used as part of the initiatives within the balanced scorecard. It could be important for organizations that are experiencing poor performance and need to improve. It can also encourage innovation, something that is becoming more important for most industries in the future. It can also help to motivate employees via the use of targets but also because benchmarking involves all employees. It is not a process that is undertaken in isolation but should be inclusive and engage employees at all levels.

10.9.2 Difficulties of Benchmarking

Active reading: Think about how difficulties can be overcome.

There are, however, difficulties that organizations need to be aware of when undertaking benchmarking exercises. If targets are set and continuously missed, it can have the opposite effect of motivating employees but can demotivate them. Under certain forms of benchmarking, for example, competitor benchmarking, there is a danger of disclosing confidential or commercially sensitive information to gain some benefit from the exercise, that is, there may be a temptation to reveal too much information. The danger of just copying what others do is also a temptation without taking the time to assess how best to implement an improvement in the organization's particular context; that is, management becomes focused on the benchmark itself rather than learning from what they have found. Benchmarking also carries the assumption that suitable partners can be found with which to benchmark.

10.9.3 Classification of benchmarking

Active reading: Note that there is a need to be clear about what it is that the benchmark is measuring and comparing rather than worrying about under which classification the exercise falls.

There are many general classifications under which benchmarking is considered. These include internal and external, formal and informal, as well as others. However, the typical types of benchmarking that might be appropriate for any organization are as follows:

Internal

Internal—comparing one operating unit or function with another in the same company, for example, one retail outlet against another, or one production unit against another. However, it is essential to be aware that outlets in different parts of the country may be affected by various factors within their local context, although the operations may be the same.

Functional/activity or best practice

Functional/activity or best practice—internal functions are compared with the best external practitioners regardless of industry. For example, inventory control with a supermarket, booking systems with a travel agent, hotel, theatre, or airline, or even comparing systems of crowd control movements between an airport and sports stadium when passengers disembark from the planes and the final whistle blows at a football match.

Competitor

Competitor—benchmarking against competitors. The best comparison is against the direct competitors, but we need to be careful that it is a meaningful comparison, so factors such as the size of organization, the geographic markets in which they operate, and so on, need to be considered. Also, this tends to be appropriate for aspects that can be benchmarked via publicly available data, for example, product ranges, prices, and so on.

Strategic

Strategic—aimed at strategic action and organizational change, for example, launching a new product, or product development. Even benchmarking against organizations that have successfully turned around a loss-making position to one of profitability could be a possibility for organizations that are performing poorly.

Industry

Industry—there may be industry standards that can be utilized; for example, many industries have trade bodies that collect and anonymize data to produce industry benchmarks that could be used for comparison. The university sector is an industry about which there is much information provided by various bodies about universities and colleges that can be used for comparison.

10.9.4 Stages of a benchmarking exercise

Active reading. Note that the accountant may be part of a benchmarking team that undertakes various projects. Think of the skill set that is required for a benchmarking exercise and how the accountant can contribute to the various stages.

There is no one definitive process for benchmarking, but a typical series of stages that an organization could follow are outlined below:

1. Establish benchmarking objectives—it is vital to have a clear idea of what it is that the management team wishes to achieve and what aspects of the business it is benchmarking.
2. Establish mixed-skills benchmarking team—benchmarking is inclusive and is not undertaken just by accountants. A team of people with a mix of skills and knowledge of the area is usually required. It also facilitates a sharing of knowledge and understanding within the company.
3. Develop relevant KPIs—the performance indicators must be developed before collecting data as this determines what data is required. It is also essential to recognize that the data must be available from both parties if benchmarking with another organization.
4. Choose an organization or business unit against which to benchmark—choosing an appropriate benchmarking partner is important as the benchmark must be meaningful and one from which the management team can learn. Also, if external, the partner will wish to learn from the exercise as well, that is, mutual benefit.
5. Measure its own and partner's performance—the stage of measuring the performance of both parties on a comparable basis.
6. Analyze data and discuss results—once collected, the data needs to be analyzed. It should also be recognized that the reason why there are differences in performance needs to be discussed as this may not always be apparent; that is, the management team needs to understand the "why" behind the difference.
7. Implement change—any improvements that could be made need to be implemented, which brings into play change management issues as employees need to be included in the process.

8. Monitor improvements—the impact of changes needs to be monitored, and often this is not immediately apparent as to why performance has or has not improved, particularly if several things have been changed as there may not be a direct link.
9. Publish success—an important step often overlooked is to publish the success of the exercise as this can act as a motivating factor for employees.

Learning activity. Think of an organization with which you are familiar and give an example of each type of benchmarking that could be undertaken.

10.10 Behavioral aspects of performance management

Active reading. Note the significance of considering the behavioral implications when establishing performance measurements.

An aspect of performance management that we should not forget is that organizations are made up of people, and performance measurement may be subject to behavioral implications, or behavioral displacement. For example, there can be a tendency to depress bad news and focus on the positive aspects of performance or manipulate performance measures to look good.

Behavioral aspects occur in setting, measuring, and interpreting performance targets. For example, creating slack resources within the budget or setting soft targets. In situations where it becomes known that senior management will ask for the expense budget to be reduced, there can be a tendency to inflate costs knowing that it will be cut later. It is essential, however, that the managers responsible are actively involved in the budget and target-setting process, in line with strategic objectives, as this will ensure their buy-in to the targets set.

Managers may undertake gaming activities; that is, focus on those areas they know are being monitored closely to the detriment of other areas. In some instances, this can lead to suboptimal behavior as managers pursue a narrow range of objectives. Sub-optimal behavior can occur in situations where managers' focus on local objectives, such as their divisional return on investment target, perhaps where this is linked to a personal bonus. Behavior such as this could be detrimental to the organization as a whole.

Presenting a biased message can occur in reporting performance or interpreting results, where information is presented in a positive light by filtering out bad news and focusing on the message the recipient wants to hear. Care must be taken in choosing the performance measures as this can also create sub-optimal behavior. For example, in health care, focusing on reducing bed occupancy rates may encourage hospitals to send patients home earlier than usual, which reduces the days a patient occupies a bed. However, if the patient is readmitted later due to becoming ill again, this is a new admittance, and the bed occupancy for the second admittance starts from zero. Therefore the occupancy rates can remain artificially lower, but the patient recovery takes longer.

Behavioral aspects can emerge throughout the whole performance management process, hence their significance in the design and operation of management control systems. The best type of performance measure is one that is understood by all involved, is seen to be fair, and is equitable and can be monitored cost-effectively. When performance is linked to reward systems, it can present problems if seen to be unfair. When linking reward and pay, there are several roles that the performance measurement system performs.

10.10.1 Roles of performance measurement in reward systems

Informational

Informational, that is, the performance measure used sends a signal to employees that management is focusing on an aspect of performance, and employees will direct their efforts toward ensuring that performance is excellent.

Motivational

Motivational, that is, the measure used acts as a motivator for employees. However, note that performance requires more than just motivation; for example, it also requires the resources to do the job. Pay is frequently linked to performance and is intended as a motivator. Not all employees, however, are motivated by money to the same extent, and motivation is not the only element of excellent performance. For example, an employee may be highly motivated, but if they do not have the resources to do the job, then any amount of motivation will not help.

Attracting personnel

Regards can be personnel-related in that the performance measures used can attract certain types of an employee to the organization. For example, if a sales force is paid a low salary but a high performance bonus it will attract people who are confident of their ability.

Non-control purposes

Rewards can be used for non-control purposes. For example, where pay is linked to organizational performance, perhaps via a "share-of-profits bonus scheme", the amount of the bonus, and hence the amount of cash required, will be less in poor performing years and can smooth remuneration payments to match the earnings of the organization.

The key to performance management systems is to match the objectives of employees with those of the organization, which will aid in the implementation and achievement of the strategy.

10.11 Summary

Management accounting can support multidimensional performance management in the following ways:

Balanced scorecard

Aiding the development of a balanced scorecard or multidimensional approach to performance measurement, particularly in respect of crystallizing objectives into quantifiable performance measures.

Data collection

Ensuring that the accounting systems can collect the data required to monitor performance in a meaningful and comparative format that is understood by managers.

Interpretation

Providing support in interpreting the performance measures and their implications for the achievement of the strategy.

Evaluation

Assisting in the evaluation of divisional performance to ensure that divisions are motivated to achieve organizational performance and to avoid the incidence of dysfunctional behavior. This is significant in the establishment of transfer pricing regimes.

Transfer pricing

Advising on the transfer to be established between internal divisions or departments for the benefit of the organization. Providing training for managers and overseeing the transfer pricing system.

Benchmarking

Contributing to the process of benchmarking by providing financial input and expertise in performance measurement to benchmarking teams.

10.12 Review questions

(1) Why is it important to use a system of multidimensional performance management rather than just focusing on financial performance.
(2) Critically evaluate the balanced scorecard as a performance management system.
(3) Discuss the factors to be considered when comparing the performance of different divisions within a global organization.
(4) Critically evaluate the concept of economic value added (EVA™).

(5) Discuss the various forms of transfer pricing and their merits in relation to encouraging trade between divisions or departments within an organization.
(6) Discuss the considerations to be considered when establishing prices for transferring goods between divisions within an organization across international borders.
(7) Describe benchmarking as a means of making improvements to existing operations and the steps in undertaken a benchmarking exercise.
(8) Discuss why potential behavioral implications should be considered when establishing performance measures.
(9) Critically evaluate how management accounting can support performance management.

10.13 Case study activities 19 -24 – HW Inc.

The following activities refer to the HW Inc. case study in Appendix A of this learning resource.

Case study activity 19 – HW Inc. Balanced scorecard

Timothy Kinder (Non-executive director) has suggested that the balanced scorecard, as developed by Kaplan and Norton, would be an appropriate model with which to monitor the performance of the company in the future.

Activity requirement:

(a) Critically evaluate how the balanced scorecard model, developed by Kaplan and Norton, will assist the management team of HW Inc. in assessing the company's performance.

(b) Illustrate for each business unit described below suitable objectives, performance measures, and initiatives that could be used as part of a balanced scorecard approach to performance management. [Note that you do not need an initiative for every objective. Usually, one per perspective is appropriate to illustrate your understanding].

HW Inc Retail stores

The retail stores are mostly high street stores, although HW Inc. is planning on opening an out-of-town store in China where it has already been relatively successful with a small store in a 'shopping village'. A shopping village is an out-of-town location where retailers have small outlets that are often devoted to selling end of season goods and disposing of surplus inventories. These are normally sold at a discounted rate to the latest products available in their high street stores.

The retail stores have not been as profitable in recent years as the market has become extremely competitive, and customers are becoming more sophisticated and demanding in their expectations. One way in which HW Inc. has attempted to compete is always to offer the latest products. This makes inventory obsolescence an issue, as judging the amount of inventory to hold to satisfy customer demand, without having massive inventory write-offs, can be difficult. This is a problem in the clothing market where products are seasonal, for example, summer range, winter range, and so on. This sector is also heavily influenced by the latest fashions. However, a new inventory management system is helping with the problem. The growth of the 'click and collect' service is working well and, along with online sales, is set to grow in the future in all product groups.

The use of concessions (companies that effectively rent space in the HW Inc. stores) also enables HW Inc. to provide a wide range of products to its customers. HW Inc. plans to try and increase the number of concessions in the next few years as it shares some of the risks between the partner companies. However, HW Inc. does not want to diminish the HW brand as they also plan to continue to develop and sell their own brand products. They also wish to retain their manufacturing capability as this provides a useful diversification from retailing and enables more control over the quality of certain product lines in which they have a manufacturing capability.

Clothing sales have been slowing in recent years, but the furniture sales are strong. The electrical goods market is highly competitive, particularly the audio-visual and kitchen aids ranges. The increased competition in the specialist electrical goods retailers has also hit the departmental stores such as HW Inc., along with the need always to offer the latest products highlighting the need for proper inventory management.

HW Inc. Interior Design

HW Inc. Interior Design has a range of corporate clients as well as retail customers. The design team copes with a variety of projects from single room design such as kitchen design for residential customers, to working with property developers and architects on both commercial and residential large-scale projects. They source products used in their designs from HW Inc. and several other companies. They have a large amount of autonomy over which products to recommend and are not necessarily tied to HW Inc. However, they always consider HW Inc. products and recommend them where they are suitable. This helps the HW Inc. research and development team, who look after the HW Inc. product range, as the Interior Design division can gather and feedback information about the products of other manufacturers, and also customer trends.

The Interior Design team are keen to expand their business and are looking to increase the number of corporate clients. In particular, they plan to target the state-owned and education sectors over the next few years. To do this, they will need to expand their design team and recruit additional staff with appropriate experience in those sectors.

HW Inc. Financial Services

The Financial Services division is seeking to increase the number of credit card customers over the next few years and is also planning to diversify into insurance products. The division already offers extended guarantees and insurance on products sold in the HW Inc. stores, particularly on electrical goods, such as fridges, washing machines, T.V.s, and computers. The management team is thinking of expanding into life insurance, travel insurance, car insurance, and home and contents insurance. This is a competitive market, but they believe that the volume necessary to breakeven on these products could be achieved if they can attract existing HW Inc. customers and build on the reputation of the HW brand. It will then provide a stable platform on which to expand the business in the future.

More recently, they have seen the administration costs increase, and the management team have highlighted this as an area where improvements could be made, perhaps via a benchmarking exercise. They also recognize that an increase in business will require an increase in qualified staff, and by adding a range of new products, it will create the need for additional training of the existing team.

HW Inc. Product development and manufacturing

This division has seen material costs increase in recent years, and they are looking at the supplier relations to see if any savings can be made on the cost of materials. The division does not see a significant increase in business over the next few years. Still, it is seeking to maintain volumes at existing levels to retain the manufacturing capability, and within this to keep the product range up to date. It means replacing existing product designs with more up to date designs rather than developing entirely new product ranges.

They see the next few years as being a consolidation of the division. Control of costs will be essential and reviewing manufacturing methods is seen as part of that process, but they do not intend to spend a lot of new capital investment in plant and equipment. They feel that there is scope to improve in areas such as waste management, energy costs, productivity, and inventory management.

Case study activity 20 – HW Inc. Critical success factors and performance management

HW U.K. is planning to expand its stores in the north of the country. The management team of the HW U.K. subsidiary believes that there is scope to increase its overall sales by tapping into some of the U.K. Government’s initiatives to stimulate the northern economy and, as the regional politicians call it, create a northern powerhouse.

Currently, HW U.K. is well known in the south of the country, and, based on their experience, the management team realizes that finding the right strategic location is a vital part of success on the high street. Also, enjoying economies of scale from the size of operation can aid cost management, and having the backing of a large parent company, which can provide finance, also aids success.

Citigroup is a retail company that owns nine of the top 20 retail locations in the U.K. HW U.K. has a store in the Citigroup held shopping center in Eldon Square, Newcastle upon Tyne (see Figure 10.7) and in the Citigroup Braeland, Glasgow (Scotland) center. HW U.K. has been in talks with Citigroup and understands that Citigroup is also keen to expand its presence in the north, as well as increasing its overseas locations. Currently, Citigroup has locations in Spain.

Citigroup offers shopping amenities that generate high footfall (the numbers of shoppers that enter a particular store) and long dwell times, that is, encouraging potential customers to spend a long time in the shopping center due to the other amenities that are on offer, such as food, and leisure activities. Both footfall, as well as purchase conversion rates, (which is the number of shoppers that enter the store who purchase products), are crucial to retail success, particularly when competitor stores are also present in the retail centers. This is highly likely as the shopping centers occupy large sites with thousands of square feet of retail space.

Citigroup offers security, cleaning, environmental and technical services to their retail tenants and is proud of their occupancy rates; that is, they have a remarkably high percentage of retail units occupied in their shopping centers. It does not look good or inspire customers if the shopping center has many empty retail units. The centers are equipped with the latest CCTV technology that monitors people entering and leaving the centers, and movement around the centers. The CCTV also monitors people moving and into and out of stores. The statistics are available to retailers. Marketing research indicates that store layout is also a critical factor in selling goods, and Citigroup can help with advice to new retailers.

HW U.K. has commissioned some marketing research to identify critical factors that will help the success of a store. The marketing research company has provided a preliminary report which included some interesting measures that they had identified.

The marketing research company has looked in detail at one of the successful HW U.K. stores in the south of the country. The store in question is located in Bournemouth, a seaside town. This is because the marketing research company had done some research for the local authority in Bournemouth and already had some general data about the area. They also did a detailed study of the HW U.K. store in Newcastle and of a significant competitor of HW U.K., which has a strong presence in the North of the U.K.. The competitor does not have a store in Newcastle, so a store in Manchester was used as the comparison site (see Figure 10.7). The information in Table 10.6 shows data for the three stores.

Table 10.6 Performance data collected by the marketing research company.

Measure	HW Bournemouth Located in the High Street in a building owned by an independent property company	HW Newcastle Located within the Citigroup Newcastle shopping center	Typical major competitor store located in the Citigroup Trafford center Manchester
Customer satisfaction score out of 10	7.8	6.7	8.0
Passing trade – average number of people entering the shopping center per day	10,000	15,000	20,000
Footfall – average number of people entering the store per day	1,500	2,000	4,000
Point of purchase – average number of purchases made in-store per day	400	450	1,000
Annual sales from the store	£8.76m	£8.0m	£9.7m
Annual cost of goods sold from the store	£6.12m	£5.92m	£6.79m
Average value of click and collect sales per annum	£0.087m	£0.16m	£0.388m
Closing inventory value at the end of the last financial year	£1.04m	£1.776m	£1.058m
Number of employees in the store	292	316	275
Square foot of retail space in store	40,000 sq ft	45,000 sq ft	50,000 sq ft
Average number of product ranges stocked in store	25,000	26,000	15,000
Annual cost of wages for store staff	£4.38m	£4.538m	£3.947m
Opening hours of store	9:00 - 17:00 Mon – Sat 10:00 – 16:00 Sun	9:00 – 17:30 Mon - Sun	8:30 – 18:00 Mon – Sun
Annual rental cost of the property (includes all establishment costs such as security, cleaning, maintenance, energy costs)	£10m	£9m	£10.5m
Unemployment rate in the region	1.8%	8.1%	7.4%
Population growth in the region p.a.	1.6%	2%	3.2%
Percentage of population of working age in the town	62.6%	68.5%	66.0%
Average annual income of population in the region	£24,300	£20,862	£21,623
Average family household size	2.18	2.4	2.35

Activity requirements:

(a) What are the critical success factors for new stores?

(b) Based on the information provided, comment critically on the comparisons provided by the marketing research company. [Points to consider include: How useful are the comparisons to the management of HW U.K. in deciding on the success criteria for a successful store in the North of the U.K.? Are there any reservations, concerns, or questions you have about the comparisons provided? What could HW U.K. do to improve the performance of its existing store in Newcastle? When undertaking this activity, do not be afraid to use your own experience of shopping centers or common-sense reasoning in thinking of ideas.]

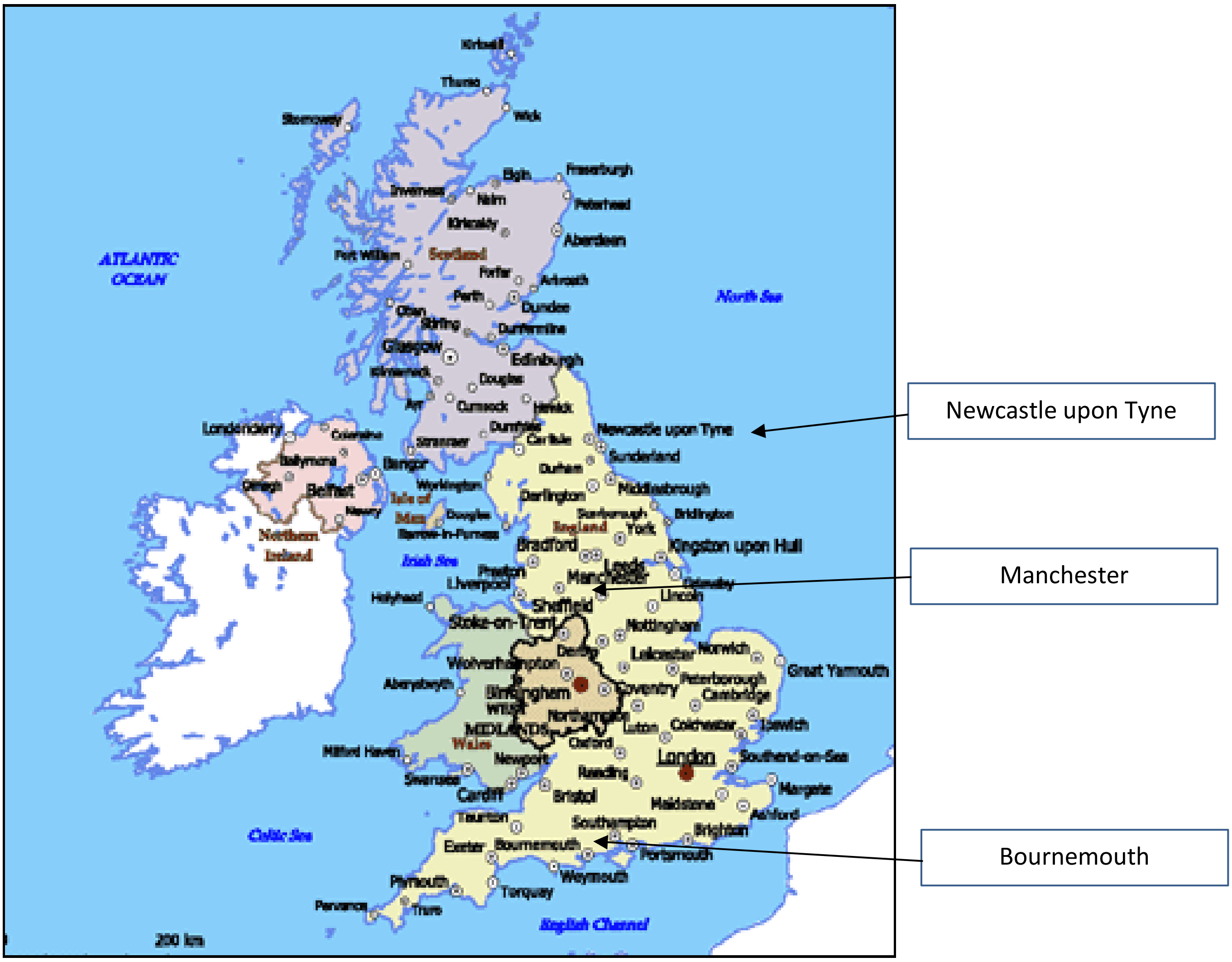

Figure 10.7 Map of U.K. – note location of Bournemouth, Newcastle upon Tyne, and Manchester.

Case study Activity 21 – HW Inc. Economic value added

The senior management team (C-suite) of HW Inc. are understandably concerned about the loss in 2020 and the potential continued loss in the 2021 financial year. Michael Holding, a non-executive independent member, has suggested that HW Inc. should adopt the method of performance reporting known as economic value added (EVA^{TM}). He explained that it was developed by a firm of consultants, Stern Stewart, primarily as a way of measuring and incentivizing senior executive performance, as well as benefiting the whole organization. The focus is on shareholder value added, which he explained becomes a core part of the company culture.

He has suggested that using EVA^{TM} could be beneficial for HW Inc. in identifying those parts of the business that add the most value. The Finance Director has asked you to investigate in more detail. Information is provided in Table 10.7.

Activity requirements:

(a) Critically evaluate the benefits and limitations of the Stern Stewart Consulting organization's EVA™ model.

(b) Illustrate how EVA is calculated by restating the results of the Products and Interior Design areas of business using the figures and information provided below.

(c) Comment upon your results and state any reservations you have about the analysis

Table 10.7 Extracts from profit and loss and balance sheet relevant to EVA calculation

	2018		2019		2020	
	Products	Interior Design	Products	Interior Design	Products	Interior Design
	$m	$m	$m	$m	$m	$m
Profit/(Loss) before interest and taxation	188.4	332.5	278.0	274.4	(91.5)	317.6
Taxation paid	45.0	79.4	67.6	66.7	5.4	67.4
The following costs have been extracted from the accounting information and were charged to the profit and loss account as an expense						
Depreciation	160.3	57.3	144.2	51.5	91.0	32.5
Research and Development	247.9	144.6	147.2	85.9	154.3	90.0
Marketing	322.8	271.8	234.8	177.7	222.3	158.8
Training	31.4	26.4	18.2	13.7	18.0	12.9

Balance Sheet information						
Net Assets	9,316.1	3,583.1	9,611.2	3,696.6	10,046.4	3,864.0

Notes:

Research and Development costs are to be written off over 3 years

Marketing costs are to be written off over 2 years

Training costs are to be written off in the year in which they are incurred.

The cost of capital of 6% is assumed.

Taxation is the actual taxation paid in each year.

Case study activity 22 – HW Inc. Transfer pricing

The Interior Design business of HW sells its services to customers of HW Inc. The division operates as a profit center and is free to recommend the best furniture, lighting, and kitchen units, etc., to suit the needs of the customer. The way it operates is to essentially purchase the units from the other divisions of HW Inc., either the factory or the stores, which it then sells to the customer, adding its own design fee to the total price. There is a type of extractor that the HW Interior Design division uses in its kitchen design. This device extract smells as well as steam.

The unit is manufactured by a small factory that HW Inc. acquired last year. Recently a dispute has arisen between the factory and the Interior Design management about the cost that the factory wants to charge the Interior Design division for the unit. The factory is confident that it can sell 100,000 units into the external market and has a capacity of 120,000 per year, so it can sell 20,000 units to the Interior Design business without affecting its own demand for external sales. However, the Interior Design business would like to buy 30,000 units. The factory believes that because of the superior quality of the product compared to its competitors, it will eventually be able to grow its external sales to the full capacity of 120,000 units within two years.

The factory division has offered to supply the Interior Design division 20,000 units at a transfer price equal to the normal selling price, less the variable selling and distribution costs that it would not incur on this internal order. The Interior Design division responded by offering an alternative transfer price of the standard variable manufacturing cost plus a 20 percent mark-up on cost. The two divisions have been unable to agree, so the operations director of HW Inc. has suggested a third transfer price equal to the standard full manufacturing cost plus a 15 percent mark-up. However, neither divisional managing director regards such a price as fair.

The information provided in Table 10.8 related to the factory forecast for next year.

Table 10.8 Factory forecast for next year.

	$,000
Sales Revenue (100,000 units at $240.00 each)	24,000
Direct Manufacturing Costs	
Bought-in materials	7,200
Labor	4,600
Packaging	800
Indirect Manufacturing Costs	
Variable overheads	200
Line production managers	600
Depreciation	
Capital equipment	3,000
Capitalized development costs	1,200
Total manufacturing costs	17,600
Sales and Distribution Costs	
Salaries of sales force	1,000
Carriage	400
General Overhead	1,000
Total costs	20,000
Profit	4,000

Notes

4 The costs of the sales force and indirect production staff are not expected to increase up to the current production capacity.

5 Depreciation for all assets is charged on a straight-line basis using a five-year life and no residual value.

6 An outside contractor provides carriage.

7 Note that the factory has the capacity to produce 120,000 units per year.

The information above relates to the factory. The product can be sold in the open market for $240. However, it is used within the Interior Design kitchen designs and therefore has an "internal market" within HW Inc. There is a similar product of inferior quality in the open market that sells at $180. At the moment the division has spare capacity but, as mentioned earlier, the management of the factory believe that they will be able to sell many more in the external market in future years and therefore may not be able to supply all of the Interior Design business needs in the future if capacity remains at the same level.

Activity requirements:

(a) Calculate the three alternative transfer prices suggested by the managers.

(b) Advise management on the transfer price to charge if there are no capacity constraints in the factory; that is, it can satisfy all demand from external customers and Interior Design.

(c) Assume that there is now a capacity constraint in the factory and that they can only manufacture enough to satisfy the external customers. What should be the transfer price to Interior Design that would be in the best interests of the company as a whole?

Case study activity 23 – HW Inc. Benchmarking

Activity requirements:

(a) Critically evaluate benchmarking as a technique for improving the profitability of HW Inc.
(b) Provide advice to the management of HW Inc. on the types of benchmarking that could be used. Illustrate your answer with examples of areas of the business or activities that could be benchmarked.
(c) Provide advice on the stages of conducting a benchmarking exercise in the context of HW Inc.
(d) What other models and frameworks have you studied where benchmarking could be used to aid the analysis.

Use the information provided on previous activities for performance management (activity 20) and the balanced scorecard (activity 19) to help think of appropriate examples of benchmarking for HW Inc.'s various business activities.

Case study activity 24 – HW Inc. Divisional performance RoI and R.I.

(This activity is based on an old professional body examination question)

HW Inc. Product Development and Manufacturing (PDM) subsidiary division is organized on business units that operate in different countries, that is, they primarily manufacture for the local retail stores in the country, but allows HW Inc. to source products globally, and to maintain a production capability in most of the continents in which it operates. Where possible, they try and supply locally.

The management of the division assesses the performance of its business units in different countries based on a target return on investment (ROI) of 10% (having set this target some time ago in the belief that it is a good estimate of the cost of capital in the division). Overall, the subsidiary division seldom achieved a 10% return, but one of its business units – the Indonesia PDM Business Unit – which is a small unit, has repeatedly surpassed target performance, as shown in Table 10.8.

Table 10.8 – Performance of PDM business unit

Year	ROI
2020	22%
2019	20%
2018	20%
2017	18%

Table 10.9 shows the most recent results for the Indonesia PDM Business Unit.

Table 10.9 Recent performance of PDM division

	Rp,m	Rp,m
Revenues		540,000
Cash operating expenses	400,000	
Depreciation	41,000	
		441,000
Direct Business Unit Profit		99,000
Business Unit Assets:		
Opening balance		450,000

Currency is in Indonesian Rupiah and is shown in millions

Early in 2020, the Research and Development Division of HW Inc. head office was asked by the Indonesia PDM Business Unit to evaluate the development of a new product range targeted at the Indonesian market. The product has incredibly good prospects and is now nearing the end of its development phase. As further development and introduction of the new product would cost Rp90,000m, the HW Research and Development head office team believes that Indonesia PDM should now take the project on board and reimburse the initial development costs amounting to Rp30,000m. However, Indonesia PDM Business Unit management is reluctant to pursue the project further because their forecasts and computations show that the project is unlikely to produce returns of greater than 20% per annum.

Indonesia PDM estimates confirm that the new product would require an additional investment of Rp90,000m and that this would generate additional revenue of up to Rp150,000m per annum over seven years. Operating expenses are estimated at Rp118,500m per annum and are exclusive of depreciation. HW Inc.'s internal group accounting practice is to depreciate total expenditure on projects (inclusive of development costs) over the life of the project using the straight-line method.

The senior management team (C-suite) at HW Inc. was surprised by Indonesia PDM's rejection of the project because of their belief in the market prospects of the new product. To advise the senior management team at HW Inc. head office, you are required to analyze the situation as follows:

1. Make calculations to confirm (or otherwise) whether the investment in the new product is desirable for HW Inc., that is, the company as a whole. Would the Indonesian division take a different view of the cash flows to be included, and what might their decision be? *(i.e., Calculate NPV using relevant cash flows, first from the viewpoint of the head office, and secondly from the perspective of the Indonesian division).*

2. Calculate Indonesia PDM Business Unit's Return on Investment (ROI) and Residual Income (R.I.) for (a) existing operations, (b) the new product, and (c) combined operations.
(Use a table for this purpose with (a), (b) and (c) as column headings, and ROI and R.I. as rows).

3. Make recommendations to the senior management team at HW Inc. head office and comment on the results of the two measures of divisional performance measurement. State which of the ROI or R.I. methods you would recommend.

10.14 References

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