

# Unit 13: Cost and Management Accounting

## Delivery guidance

### Approaching the unit

This unit gives learners an insight into cost and management accounting, which is primarily concerned with producing financial information and statements, to help a business plan for the future. This is in contrast to the other accounting and finance units, which are about financial accounting – the reporting of past financial information.

There are a number of different cost and management accounting methods covered and learners will be required to produce accurate calculations and concise cost statements. However, learners also need to analyse and evaluate their calculations in context of the scenarios given to them. This is vital if they wish to achieve at merit or distinction level.

It is essential that learners are involved in practical activities as much as possible when delivering this unit. It is also helpful to ensure that learners consider the potential limitations and benefits of the systems as they cover each one. They will also be required to give reasoned judgements and recommendations using their results.

You can use a range of delivery methods for this unit, for example:

- discussion – class and group discussion on topics such as the different types of costs
- individual and/or paired completion of practical cost and management accounting exercises
- case studies and scenarios for the practical exercises, which could be used for more than one learning aim.

Group work is an acceptable form of delivery for aspects of the unit, but you must ensure that learners individually produce evidence that is sufficient for assessment.

You can involve local employers in the delivery of this unit by inviting them as:

- guest speakers
- providers of business materials as basis for case studies and exemplars.

### Delivering the learning aims

For learning aim A it would be useful to start this unit with a discussion about the difference between financial and management accounting as well as the difference between cost and management accounting. Using knowledge from break-even in *Unit 3: Personal and Business Finance*, recap the different types of costs: fixed, variable and semi-variable. It might be helpful to use graphs and draw lines for fixed, variable and total costs on them. There is no need to use actual numbers, but a general reminder of the shape of each line can be useful to learners. Once this recap has been done it is then relatively straightforward to go into the difficulty in apportioning overheads (fixed costs) to production



departments and then individual products. The inclusion of semi-variable costs can help demonstrate this even more.

Absorption costing can be quite lengthy to cover but once learners understand the principle behind it (that is, **all** costs are absorbed into the total cost of each unit produced) and the steps involved, then completing practical exercises can be fairly straightforward. Using the approach of the three As can be a good way of approaching this.

- Allocation – those overhead costs that are directly incurred by a particular cost centre. For example, the assembly line supervisor's wages can be allocated directly to the 'assembly' cost centre.
- Apportionment – divide all shared overheads between the production and services cost centres using a 'basis of apportionment'. NOTE: If you use scenarios that include service centres then there is another sub-stage here, i.e. reapportionment of the service cost centre(s).
- Absorption - absorb the allocated and apportioned overheads into the cost of production of each unit using an overhead absorption rate (OAR).

You do not need to make this process onerous for learners. There are plenty of practical exercises in accounting textbooks, and many include a long list of overheads to be apportioned. But this is not necessary for the unit here. For example, there is no need to include allocated overheads – presume that all overheads are shared. Three or four overheads will be sufficient for learners to understand how to decide and use a basis of apportionment. Include just two or three production cost centres and only one service cost centre. Specify the percentage basis on which it is to be reapportioned. Finally, calculate overhead absorption rates (OARs) using the machine hour rate and/or the labour hour rate only. You could make one cost centre labour intensive and the other capital (machine) intensive for example.

The same principle applies to preparing a job cost sheet. This needs to include the variable (direct) costs: materials and labour. Then the fixed (indirect) overheads using the OARs. Again, there is no need to have a long list of variable costs. The OARs will be relatively easy to apply if you have only two production cost centres. Use mark up or margin to set the selling price and show profit.

Once absorption costing has been covered and practised then you can move directly onto marginal costing. You could make the link to break-even and the calculation of contribution if you like here. In any case, learners should find this much more straightforward because they only need to include variable (direct) costs in their calculations. The key emphasis here is on why marginal costing is used and possibly the best scenarios to use would be issues such as 'special orders', make or buy, or 'limiting factors' so that learners can identify the key fact that marginal costing has a very useful role to play in cost statements and decisions but generally only for particular (usually 'one-off') situations.

Once plenty of practical exercises have been used, learners could use group work to assess the relative merits and drawbacks of the two costing systems as well as their appropriateness for given scenarios. Encourage learners to analyse in context of the case and/or scenario so that they are more confident about doing this for their final assessment.

For learning aim B, start with a definition of standard costing and its main use. The key focus should be on variance analysis in helping to control budgets and estimated costs. This is because standard costing compares standard costs (and revenues) to the actual costs (and revenues). The resulting difference is known

as a variance. It is important that learners appreciate that standard costing is used in conjunction with absorption or marginal costing techniques.

A class discussion could be used to consider the three main standard costs: materials, labour and overheads as well as standard sales (revenue). Learners could perhaps then complete a flow chart to show the variances and subsequent sub-variances for each of these. Practical exercises can then be used to calculate sub and overall variances. There is no need to complete a reconciliation statement of total standard cost with actual cost.

Learners could then work individually or in small groups to research and consider the typical reasons for variances including the interrelationship between sub-variances. For example, material usage variance might be favourable because the material use is better quality; however, the material price variance may be adverse because better quality materials have cost more, and so on.

Finally, learners need to appreciate the importance of standard costing and how breaking down and identifying sub-variances mean that departments, cost centres and even individuals can be held accountable.

For learning aim C, a recap of the cash budget work completed for *Unit 3: Personal and Business Finance* would be useful and the reasons for budgeting. There are obvious links here to learning aim B since both standard costing and budgeting are used to identify and control variances.

It might be useful to show learners examples of budgets with monthly planned revenue and expenditure given for each item. Alternatively, you could ask them to complete a cash budget as has already been covered in *Unit 3: Personal and Business Finance*. Learners could work in small groups to identify the structure of the different types of budget listed in the unit specification. They should also understand how budgets are likely to vary between contrasting businesses, such as manufacturing and retail.

Learners must have a broad understanding of the definition of all master budgets (profit and loss and balance sheet) and subsidiary budgets listed in the specification. They could research these definitions and create a table or flow chart to show how they all link together. It would enhance learners' understanding of budgets if the practical exercises that they complete show how subsidiary budgets can directly link into master budgets.

Learning aim D could be introduced with a discussion about the importance of investment by businesses generally, together with some examples. The key point here is that capital investment is expected to generate financial and non-financial benefits well into the future. Learners could consider some large-scale recent projects undertaken in the UK and the benefits they are now generating for the economy.

Then you could consider the long-term investment decisions for individual businesses. You could relate this to the concept of opportunity cost too, which would help learners appreciate that businesses almost always have to decide between investment alternatives and therefore use investment appraisal to help with the decision. Bear in mind too, that while fixed assets are often a natural choice there are other projects which could be analysed using investment appraisal such as a decision between alternative products, research and development and large-scale marketing campaigns.

Practical exercises need to be completed and these should include the use of all three main methods: payback, accounting rate of return (ARR) and net present value (discounted cash flow). These could be fairly straightforward to begin with and you might like to teach each method and do an example or two separately to begin with. Then ensure that the exercises use all three methods so that their



results can be compared and analysed by learners. Furthermore, business scenarios must be written in such a way that learners can consider the non-financial implications of the capital investment choices and not just the investment appraisal calculations.

Learners could research the main non-financial considerations or you could consider inviting in a guest speaker from a local business in the area who has been involved in setting up a new capital investment project. For example, a new branch of supermarket or other retailer or someone from a construction company working on a new building site in the local area. This does not mean that the exercises used for class work or the final assessment have to be as large-scale as this, but it would give learners some good examples of the kinds of non-financial issues and stakeholder concerns which inevitably arise. Moreover, it would assist learners in appreciating how businesses deal with non-financial issues before and during the construction of a capital project.

Learning aim	Key content areas	Recommended assessment approach
<b>A</b> Explore absorption and marginal costing techniques for decision making	<b>A1</b> Classification of costs and costing methods <b>A2</b> Use of costing methods <b>A3</b> Analysis of costing methods	<p>A written report which outlines the different types of costs, main costing methods and their uses.</p> <p>Calculate and apply absorption and marginal costing from a given scenario/case study.</p> <p>The written report will also compare, contrast and evaluate the usefulness of absorption and marginal costing techniques and assess the significance of non-financial factors.</p> <p>A table of overall and sub-variance calculations from a given scenario/case study.</p> <p>A written report which examines and analyses the variances.</p> <p>The report must include the possible reasons for, and interrelationship between, the overall and sub-variances.</p> <p>It will also include recommendations for variances that need further investigation.</p> <p>A written report to explain the main types of budget. An analysis of the main purposes of budgeting as a management tool in planning and control. An evaluation of the advantages and limitations of budgets.</p> <p>Practical exercises to prepare suitable subsidiary, cash and master budgets.</p>
<b>B</b> Carry out standard costing and variance analysis statements	<b>B1</b> Purpose and stages of standard costing <b>B2</b> Type and calculation of variances <b>B3</b> Variance analysis	
<b>C</b> Explore budgets for financial planning and control	<b>C1</b> Type and purpose of budgets <b>C2</b> Usefulness of budgetary control <b>C3</b> Preparation of budgets	
<b>D</b> Undertake investment appraisal of long-term capital investment projects	<b>D1</b> Investment appraisal methods <b>D2</b> Financial and non-financial perspectives	<p>A calculation of the three main investment appraisal methods using an appropriate scenario.</p> <p>An evaluation of the capital investment proposals from a financial and non-financial perspective. The presentation must include a supported and justified capital investment recommendation.</p>



## Assessment guidance

This unit is internally assessed through two assignments. The first covers learning aims A, B and C, and the second covers learning aim D. All learners must independently generate individual evidence that can be authenticated. The main sources of evidence are likely to be an individual written report accompanied by individual research, plus calculations.

BTEC assessors could complete observation records and learner's colleagues in placements or part-time work could complete witness statements. Note that observation records alone are not sufficient sources of learner evidence, the original learner-generated evidence must also support them.

Although learning aims A, B and C are grouped together for one assignment, you do not have to use the same business throughout if you do not wish to. Either way would be acceptable. Distinction criteria D1 can still be met by making separate recommendations for different business scenarios and D2 would still pull together an overall evaluation of the systems themselves. However, in learning aim A it is important that the same business scenario is used for the marginal and absorption cost statement. This is to ensure that the merit and distinction criteria can be met in context of the given business scenario.

For learning aim D learners must calculate all three investment appraisal methods and their exercises and final assessment must include at least two different investment proposals/alternatives. This will ensure that pass, merit and distinction criteria can be accessed effectively.

## Getting started

This gives you a starting place for one way of delivering the unit, based around the specification.

### Unit 13: Cost and Management Accounting

#### Introduction

Start the unit by discussing the difference between this unit and the other accounting units and also the difference between cost and management accounting. Summarise the unit and draw on content which has been covered in the compulsory finance *Unit 3: Personal and Business Finance*.

#### Learning aim A – Explore absorption and marginal costing techniques for decision making

- Start with a whole group discussion about all the different types of cost, which businesses typically incur. Ask learners to put them into two broad categories: costs which are **directly** related to production and those which are **indirectly** related to production. Consider some which could be both. Relate indirect costs to overheads. The discuss how difficult it is to allocate overheads to specific units of production.
- Move on to practical accounting exercises using absorption costing. Break each step down using the three As of absorption costing and you could use different exercises at first for each separate step and then bring them together in whole exercises when learners are confident about the process. Finally ensure that some practice includes the preparation of an individual job cost sheet so that the absorption costing is used to incorporate overheads using the OARs and arrive at a selling price.
- Next, move on to marginal costing as the other main costing system. Again, practical exercises should be used and it is advisable that some use the same business as those used for absorption costing. This means that learners can identify when, how and why each costing system is used within the same businesses. The exercises must include the scenarios listed in the specification so that any can be set in the final assessment.
- Learners could be split into small groups to discuss the relative merits and drawbacks of the costing systems; this information could be summarised in a useful table for reference later on. They could then conduct a group evaluation for one or two of the exercises.

#### Learning aim B – Carry out standard costing and variance analysis statements

- Start this topic with a discussion about the importance of comparing standards (estimates) with actual results. Then ask learners to consider what they think is done about differences (variances) between standard and actuals. This should get them thinking about not just variances but **where** they have come from and **who** is responsible.
- Use whole class discussion to summarise the main types of variance and then the subsequent sub-variances material (price and usage), labour variance (rate and efficiency), sales variance (price and volume) and overhead variance. Learners could complete a flow chart with brief definitions of each and the formula for calculating each one. Bring the group back together as a whole to discuss how breaking down the variances in this way makes identifying, controlling and investigating reasons much easier to do.



- Issue individual exercises so that learners calculate sub and whole variances. These exercises can include an overall reconciliation statement actual to standard overall cost if you wish but it is not compulsory.
- Learners could work in small groups to compare their answers and then begin to ascertain the reasons why there are variances. They could identify the most significant and begin to make suitable recommendations to improve the position for the given business case.

### **Learning aim C – Explore budgets for financial planning and control**

- Start with a recap about the budgets that were covered in *Unit 3: Personal and Business Finance* and perhaps even cover an example of a cash budget (or cash flow forecast).
- Use group work or class discussion to consider the main purposes of budgeting – there may be links here with standard costing.
- Split learners into small groups to research the main subsidiary budgets and the master budgets: what they are, what they include, and their typical layout with a prepared example. Different groups could be given different subsidiary budgets to research, with the master budgets being completed in every group or as a whole class.
- Use practical exercises so that learners complete subsidiary and master budgets individually or in pairs.
- Finally in pairs, learners could analyse the budgets and how viable they are (benefits and limitations) for given business scenarios.

### **Learning aim D – Undertake investment appraisal of long-term capital investment projects**

- Introduce the topic with a definition of investment and some statistics about investment by businesses in the UK in recent years. Has investment risen or fallen? Does it matter? What examples are there? How does investment generally help the UK economy?
- Next, ask learners to work individually or in small groups to research some recent large-scale investments – these could be public or private sector. They could do a small presentation to the rest of the group about the investment project – a summary of what it is, how long it will take and its likely cost. They should also consider the financial and non-financial drawbacks and benefits that the project is likely to generate in the future. Encourage learners to consider opportunity cost in their work – that is, what alternatives could the money have been spent on.
- Invite a speaker in to discuss a local large-scale investment project if you are able to – there are examples in the delivery section above. They could be asked to give a short presentation in the same way as above.
- Then as a whole class introduce investment appraisal as one (financial) way a business can compare and contrast alternative investment options when they are considering long-term, large-scale capital investments of their own.
- Use practical accounting exercises to complete investment appraisal using the three methods listed in the specification (payback, accounting rate of return and net present value). The exercises must have at least two different investment proposals/alternatives. It might be useful to teach each method separately and get learners to complete separate short exercises on each method and then bring all three together in later exercises.
- Finally, learners could work in pairs to analyse the financial results of their three methods for the investment proposals and come to a reasoned recommendation about which one the business should choose. This task could then be extended to consider what and how non-financial factors affect the capital investment proposal.

## Details of links to other BTEC units and qualifications, and to other relevant units/qualifications

Pearson BTEC Level 3 Nationals in Business (NQF):

- Unit 3: Personal and Business Finance.
- Unit 10: Recording Financial Transactions.
- Unit 12 Financial Statements for Specific Businesses.
- Unit 13: Cost and Management Accounting.

## Resources

In addition to the resources listed below, publishers are likely to produce Pearson-endorsed textbooks that support this unit of the BTEC Nationals in Business. Check the Pearson website (<http://qualifications.pearson.com/endorsed-resources>) for more information as titles achieve endorsement.

## Journals

- *Business review* (Philip Allan Magazines).  
A journal designed for Business Studies learners that includes relevant and topical business articles and case studies as well as information on companies and markets.

## Websites

- [www.beta.tutor2u.net](http://www.beta.tutor2u.net)  
A website containing resources, case studies, articles and revision materials. There are also links to other sources of information.
- [www.thetimes.co.uk](http://www.thetimes.co.uk)  
*The Times* gives up to date information and case studies about a whole range of different businesses and organisations.