

SQA Advanced Unit Specification

General information for centres

Unit title: Supply Chain Business Analysis: An Introduction to Techniques

Unit code: HP5P 47

Superclass: AK

Publication date: August 2017

Source: Scottish Qualifications Authority

Version: 01

Unit purpose

This Unit introduces learners to a range of accounting and statistical analysis techniques, together with business metrics, relevant to the supply chain. These techniques are then used to evaluate the performance of the organisation as well as the effectiveness of its activities within the supply chain.

The Unit is primarily intended for learners who may be working or intend to work in a procurement role within the supply chain, although it would also be appropriate for those involved in the various functions associated with the supply chain, manufacturing, inventory, stores, production, distribution, planning, demand management, purchasing and customer relations.

Outcomes

On completion of the Unit the learner should be able to:

- 1 Compare sources of finance available to private and public sector organisations for capital projects, how the requirements are determined, the costs analysed and the investment appraised.
- 2 Analyse supplier financial data as part of the pre-purchase order/contract award stage.
- 3 Analyse organisational cost data and business metrics.
- 4 Use statistical methods for business analysis.

SQA Advanced Unit Specification

Credit points and level

1 SQA Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from National 1 to Doctorates.*

Recommended entry to the Unit

Access to this Unit is at the discretion of the centre. However, learners are expected to have work experience relevant to the activities of the supply chain. It is not necessary that learners hold a team leader, supervisory or management position.

Learners are also expected to have competency in numeracy and communication skills to at least SCQF level 5. This may be evidenced by possession of the Core Skills Units in *Numeracy* and *Communication* or similar qualifications or experience.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

The Assessment Support Pack (ASP) for this Unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable Instrument of Assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website.

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Unit specification: statement of standards

Unit title: Supply Chain Business Analysis: An Introduction to Techniques

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Compare sources of finance available to private and public sector organisations for capital projects, how the requirements are determined, the costs analysed and the investment appraised.

Knowledge and/or Skills

- ◆ Sources of finance
- ◆ Capital purchasing analysis
- ◆ Total life cycle costs analysis
- ◆ Investment appraisal techniques

Evidence Requirements

Learners will need evidence to demonstrate all aspects of their Knowledge and/or Skills in this Outcome by showing that they can:

- ◆ identify **two** sources of finance available to private and public sector organisations, and explain the advantages and disadvantages of each source
- ◆ define **two** alternative methods of financing a capital purchase
- ◆ describe the difference between revenue and capital purchasing
- ◆ explain a decision making process that is relevant to capital purchasing
- ◆ calculate the life cycle cost for a specific capital purchase
- ◆ demonstrate an understanding of **two** methods used for investment appraisal from:
 - payback
 - discounted cash flow
 - accounting rate of return

Outcome 2

Analyse supplier financial data as part of the pre-purchase order/contract award stage.

Knowledge and/or Skills

- ◆ Analysis of financial statements
- ◆ Budgeting processes
- ◆ Ratio analysis
- ◆ Auditing of supplier performance

SQA Advanced Unit Specification

Evidence Requirements

Learners will need evidence to demonstrate all aspects of their Knowledge and/or Skills in this Outcome by analysing supplier financial data as part of the pre-purchase order/contract award stage, showing that they can:

- ◆ analyse and compare **two** supplier financial statements
- ◆ evaluate **two** supplier company accounts using **four** financial ratios
- ◆ prepare a budget and cash flow statement to support a supplier appraisal method

Outcome 3

Analyse organisational cost data and business metrics.

Knowledge and/or Skills

- ◆ Elements of costs — fixed and variable costs
- ◆ Direct, indirect and standard costs
- ◆ Process costs
- ◆ Costs and margins
- ◆ Breakeven analysis
- ◆ Business metrics

Evidence Requirements

Learners will need evidence to demonstrate all aspects of their Knowledge and/or Skills by analysing organisational cost data and business metrics, showing that they can:

- ◆ describe the differences between fixed and variable costs giving examples of each
- ◆ differentiate fixed, variable direct and indirect costs and apportion them correctly
- ◆ calculate a breakeven point for a product
- ◆ explain the analysis of **three** business metrics from the following:
 - sales revenue
 - customer loyalty and retention
 - cost of customer acquisition
 - operating productivity
 - gross margin
 - monthly profit/loss
 - overhead costs
 - variable costs (percentage)
 - inventory size
 - labour hours per process
 - return on investment

The assessment should be carried out under closed-book controlled conditions.

SQA Advanced Unit Specification

Outcome 4

Use statistical methods for business analysis.

Knowledge and/or Skills

- ◆ Descriptive statistics
- ◆ Inferential statistics
- ◆ Forecasting methods

Evidence Requirements

Learners will need evidence to demonstrate all aspects of their Knowledge and/or Skills in this Outcome by using statistical methods for business analysis, showing that they can:

- ◆ explain the role of statistics in the work of a supply chain professional
- ◆ interpret basic statistical data
- ◆ apply statistical analysis to purchasing and supply chain issues
- ◆ assess the reliability and accuracy of forecasts
- ◆ plot a quality curve and recognise how warning limits are derived

The assessment task should enable the learner to carry out **two** separate calculations from each of the following categories:

- (a) Diagrams, averages, measures of dispersion and index numbers.
- (b) Probability, expected value and distribution.
- (c) Time series, regression analysis and a statistical quality control method.

A quality curve, using data from the learner's workplace or case study, should be incorporated into their response.

Assessment should be carried out under supervised conditions.

SQA Advanced Unit Specification

Unit specification: support notes

Unit title: Supply Chain Business Analysis: An Introduction to Techniques

Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit is likely to form part of an SQA Advanced Supply Chain Management Group Award. It is designed to enable learners to understand the definitions and concept of business analysis within the supply chain.

It is recommended that the learner should have experience of working in a supply chain or associated function.

There may be opportunities for learners who successfully achieve this Unit to gain exemptions from a number of professional bodies. Learners should contact the relevant professional bodies to ascertain their current exemption policies.

Outcome 1 looks at the various sources of finance available to both the private and public sector organisations and the requirements of capital buying.

- ◆ Sources of finance
- ◆ Methods of financing a capital purchase
- ◆ Revenue and capital purchasing
- ◆ Decision making process
- ◆ Life cycle cost
- ◆ Methods of investment appraisal

Outcome 2 looks at the analysis of supplier financial data as part of the pre-purchase order/contract award stage.

- ◆ Financial statements
- ◆ Company accounts
- ◆ Budget and cash flow statement

Outcome 3 looks at the analysis of organisational cost data and business metrics.

- ◆ Elements of cost — fixed and variable costs
- ◆ Direct, indirect and standard costs
- ◆ Process costs
- ◆ Costs and margins
- ◆ Breakeven analysis

Outcome 4 looks at the use of statistical methods for business analysis.

- ◆ Descriptive statistics — diagrams, averages, measures of dispersion and index numbers
- ◆ Inferential statistics — probability, expected value and distributions
- ◆ Forecasting methods — time series, introduction to regression analysis and statistical methods of quality control

SQA Advanced Unit Specification

Guidance on approaches to delivery of this Unit

This Unit may be delivered as one of the Units within the SQA Advanced Diploma in Supply Chain Management.

It is anticipated that this Unit may be delivered to a variety of learner groups and, wherever possible, teaching and research should be slanted towards their individual needs. The latest materials and examples from current and business practice should be used to highlight and illustrate the differences between organisations.

In addition to the classroom explanations and discussions that this Unit provides, learners should be encouraged to make use of relevant websites to gather information for themselves. Direction may be required on the location of useful information sources, however learners should be encouraged to use their initiative to discover the other various sources of information available.

To achieve this Unit, learners must produce satisfactory assessment evidence that shows they have achieved all of the Unit Outcomes.

Guidance on approaches to assessment of this Unit

Evidence can be generated using different types of Instruments of Assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

To achieve this Unit, the learners must produce satisfactory assessment evidence that shows they have achieved all of the Unit Outcomes. This Unit could be assessed by a report based on the learner's experience of working in a supply chain related environment or by questions based on a case study.

It is recommended that this Unit be assessed by a separate assessment for each Unit Outcome.

Outcome 1 could be assessed by a report of approximately 800 words. Reference should be made to two sources of finance, two methods of investment and two methods of appraisal.

Outcome 2 could be assessed by a case study with learners analysing the financial data of **two** companies. Learners should use **four** financial ratios as part of the evaluation process. It is recommended that a case study be used for learners to prepare the budget and cash flow.

Outcome 3 may be assessed with a set of structured questions based on a case study. This assessment is carried out under closed-book controlled conditions.

The assessment of Outcome 4 may take the form of a set of structured questions based on a case study. The case study may be issued to learners in advance of the assessment event, which will be carried out under supervised conditions. The assessment task should enable learners to complete six calculations.

SQA Advanced Unit Specification

Where a workplace situation is used, care should be taken to ensure that it would provide learners with sufficient opportunity to meet the Evidence Requirements of the Unit. Reports can be supplemented by additional questions to ensure all aspects of the Evidence Requirements are met.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

There are no Core Skills embedded in this Unit. However, there are opportunities for developing the Written Communication component of the Core Skill of *Communication* at SCQF level 5 and the Core Skill of *Numeracy* at SCQF level 6 in this Unit.

Communication — Written Communication at SCQF level 5

All four Outcomes provide learners with the opportunity to develop their written communication skills.

Opportunities will occur where learners present written responses as part of their work throughout the Unit, but especially in the assessment which may be a written project or responses to questions based on a specific case study. Learners will, therefore have to analyse information and organise the content of their report/responses into a logical and effective structure.

Numeracy — Using Number at SCQF level 6

In Outcomes 3 and 4, learners will be expected to calculate profit margins and breakeven points. They will have to apply a combination of numerical methods to solve complex everyday problems.

Numeracy — Using Graphical Information at SCQF level 6

In Outcomes 3 and 4, learners will have the opportunity to develop their graphical skills in the creation of breakeven charts and in interpreting information from tables, graphs or diagrams to analyse information.

They will again have the opportunity to use these skills as part of their project report by selecting an appropriate graphical form to communicate information.

Administrative information

Version	Description of change	Date

© Scottish Qualifications Authority 2013, 2017

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

FURTHER INFORMATION: Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000. Alternatively, complete our [Centre Feedback Form](#).

General information for learners

Unit title: Supply Chain Business Analysis: An Introduction to Techniques

This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

This Unit introduces you to the basic concepts used for business analysis within the supply chain.

It can be studied as a standalone Unit if you simply wish to gain knowledge/skills of the specialist area of supply chain management.

The ability to manage an organisation and its processes effectively contributes greatly to organisational survival and improved performance. Those responsible for manufacture, procurement and logistics need to be aware of the implications of financial and statistical analysis to measure the overall efficiency and effectiveness of their own activities, and to understand the interrelationship of business activities within the supply chain.

There are four Outcomes in this Unit.

In Outcome 1, you will study the sources of finance available to fund a capital purchase.

You will analyse supplier financial data in Outcome 2. You will learn about the budgeting process and ratio analysis.

In Outcome 3, you will analyse organisational cost data as part of the pre-purchase order/contract award stage.

Outcome 4 involves the use of statistical methods for business analysis. This may involve descriptive and inferential statistics and forecasting methods.

The assessment for this Unit may take the form of reports for Outcomes 1 and 2 and sets of structured questions for Outcomes 3 and 4. In Outcome 4, you will also be required to undertake statistical calculations.

Where you have industrial experience in a supply chain environment, the report can be based on this organisation. Alternatively, the assessment may be based on a case study.

If you achieve this Unit, there may be opportunities for you to gain exemption from a number of professional bodies. It will be your responsibility to ascertain from the professional body what is included in their current exemption policies.