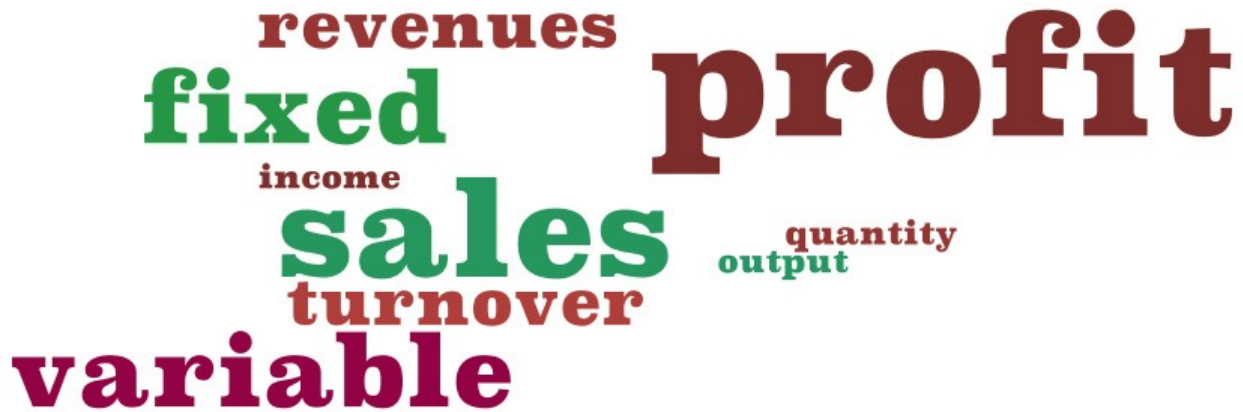


Calculating Costs, Revenues and Profits



Meaning & importance of profit

In this section we cover some very important financial concepts for any business – but particularly any start-up business.

The word that will appear time and time again in this section is **profit**. A short word, but an extremely important word if you are the entrepreneur risking your investment in a new business venture.

Profit is the financial **return** that entrepreneurs aim to achieve to reflect the **risk** that they take.

Given that most entrepreneurs **invest** in order to make a return, the profit earned by a business can be used to measure the success of that investment.

Profit is also an important signal to other providers of finance to a business. Banks, suppliers and other lenders are more likely to provide finance to a business that can demonstrate that it makes a profit (or is very likely to do so) and that it can pay debts as they fall due.

Profit is also an important **source of finance** for a business. Profits earned which are kept in the business (i.e. not distributed to the owners via dividends or other payments) are known as **retained profits**. Retained profits are an important source of finance for any business, but especially start-up or small businesses. The moment a product is sold for more than it cost to produce, then a profit is earned which can be reinvested.

Thanks to those wonderful accountants, profit can be measured and calculated. So here is the formula:

$$\text{PROFIT} = \text{TOTAL SALES less TOTAL COSTS}$$

When total costs are greater than total sales (or revenue), the business is said to make a **LOSS**.

That seems pretty simple. Unfortunately for you, the BUSS1 specification requires that you look a little closer at those sales and cost items and then to understand the relationship between cost, sales and profit. We'll guide you through what you need to know in the following notes.

You should also remember that what we cover here is particularly relevant and useful to two other parts of the BUSS1 specification:

- Break-even analysis, and
- Using budgets

Measuring sales

First, a few words on the various terms that are used by businesses, AQA examiners and your teachers to describe what is actually the same thing!

Alternative terms for “sales” include:

- Revenues
- Income
- Sales turnover
- Takings

We'll stick with the word “sales”, but look out for those alternatives terms in the BUSS1 exams.

Sales arise through the **trading activities** of a business. The value of sales achieved in a given period is a function of the quantity of product sold multiplied by the price that customers paid. So you see that total sales can be calculated by this formula:

$$\text{Total sales} = \text{volume sold} \times \text{average selling price}$$

A business that wants to achieve higher sales needs to either:

- Increase the amount or volume sold (higher quantity),
- Achieve a higher selling price,

Or (ideally) both of the above!

To see how this formula works, let's look at an example.

Petra is a talented web designer and she plans to start a new web design business that will focus on designing effective e-commerce sites for niche retailers. Petra's sales budget assumes that she will win the following volumes of design contracts in the four quarters of her first trading year:

Quarter	Number	Average Value per Contract	Total Sales
Jan-Mar	6	£2,500	£15,000
Apr-Jun	7	£2,500	£17,500
Jul-Sep	5	£3,000	£15,000
Oct-Dec	8	£2,750	£22,000
Total	26	£2,673	£69,500

In the example above, Petra is expecting to achieve total sales of £69,500 in the first year of trading. These sales come from a total of 26 contracts, with an average selling price per contract of £2,673.

How might Petra improve the total sales in year one?

Winning more web design contracts might help, although 26 contracts in the first year already looks like a lot of work. A fully-functioning e-commerce site for a retailer is likely to be a relatively complex and time-consuming project, so there seems little scope for Petra to increase volumes, unless she is able to raise capacity by employing extra designing or outsourcing elements of the work.

In Petra's case, the solution to higher sales can probably be found in the average selling price achieved. By focusing on smaller number of higher-value contracts, Petra may be able to raise sales and deliver a better service.

For example, if Petra did just 20 contracts in Year one (6 fewer than budget) at an average contract price of £4,000, then her total sales will be £80,000 (20 x £4,000), an increase over the existing sales budget of £10,500.

How to achieve higher average selling prices?

You might initially think that the answer is to **increase prices**. In Petra's case, she might price her contracts by reference to an hourly rate (e.g. £30 per hour). Increasing this rate would mean that the value of individual contracts would raise, but customers might not accept the new, higher price for the same work. It could be that a higher hourly rate will lead to Petra losing contracts that she would otherwise have won.

An alternative to increasing prices is to look for **higher value work** – for example contracts that involve more hours, but priced at the same rate.

Measuring costs

Successful entrepreneurs are usually obsessed with “costs”. They want to know:

- What it costs to produce the product or service?
- What the cost of marketing the product is?
- How high are the overheads of the business?
- What the potential costs of a business decision are?

Why the obsession with costs? Because costs...

- Are the thing that drains away the profits made by a business
- Are the difference between making a good and a poor profit margin
- Are the main cause of cash flow problems in a small business
- Change as the output or activity of a business changes – the entrepreneur needs to know how these are likely to change

So let's examine costs in a little more detail.

Distinction between fixed and variable costs

An important part of understanding costs is to look at the way that costs change when the level of activity of the business changes. We'll use the term “**output**” to refer to changes in the quantities produced by a business.

In real business life, the following “textbook” distinction between types of cost is not straightforward. However, bear with us since the following topic is really important to your studies in BUSS1 and it links in closely with the topic of break-even analysis.

Costs which do not change when output changes are known as “**fixed costs**”

Costs which change when output changes are called “**variable costs**”

[Note: it is normally assumed that the percentage change in a variable cost is the same as the percentage change in output, but this doesn't have to be the case].

Here is a summary of the main examples of fixed and variable costs in a typical start-up or small business:

Fixed Costs	Variable Costs
Rent & rates for the premises	Costs of raw materials and other inputs into the production process (e.g. components bought-in)
Wages & salaries of employees (those whose pay isn't directly linked to output)	Wages of employees where pay is directly linked to output (e.g. pay per hour or pay per unit)
Marketing costs (e.g. research, advertising,	Marketing costs which vary based on how much is sold (e.g. salesman commission, promotional discounts)
Insurance, bank charges, accounting & legal fees	
Software and other IT-related costs (e.g. equipment leasing, website design)	
Consultant and adviser costs (includes activities that are outsourced – e.g. payroll)	
Product development costs (e.g. design, prototypes, consumer tests)	

There are some costs which are fixed for a certain level of output, but which then change once a higher level of output has been reached. These are known as “**semi-fixed costs**” (you will also see them referred to as “semi-variable costs”!

A good example is office space. Take the tutor2u business as an illustration. When the business first started, it operated from a loft conversion. Then, as volumes of orders increased, the business moved to one serviced office. Since then, as volumes have grown, the business has moved into three offices to handle the need for more employees. The fixed cost of office space might have been £10,000 (say) for a year, but then increased to £20,000 per year at the higher volume (output).

Exam tips

An entrepreneur starting a new business often finds it hard to forecast sales, costs and profits, especially if he/she has no experience of trading in the market. It is not unusual for the initial assumptions made in a business plan to prove inaccurate, so be careful about being too critical if this comes up in your BUSS1 case study.

Setting the price for a new product is particularly difficult. Many factors influence the price that customers are prepared to pay. A good piece of advice to offer in your answers is for the entrepreneur to experiment with different prices, promotions etc in order to find a profitable price which customers are happy to accept.

Start-ups often under-price their product because they fear too high a price will discourage demand when the business or product is launched. An increase in price will not necessarily result in lower quantity demanded.

Guided revision questions

Revision questions for Calculating Costs, Revenues and Profits

- (1) Define the term "profit" (2 marks)
- (2) State two reasons why an entrepreneur would want to forecast costs for a start-up (2 marks)
- (3) State two purposes for which profits are used by a business (4 marks)
- (4) In the first month of trading, a business sells 3,000 units of product A at a selling price of £10 and 2,500 units of product B at a selling price of £15. What was the total revenue in month 1? (4 marks)
- (5) Explain why an entrepreneur might not be too concerned about a start-up business making a profit in the early period of trading (6 marks)
- (6) Why might a start-up business set an aim of maximising sales revenue rather than profit? (4 marks)
- (7) State two ways in which a business can increase its sales revenue (2 marks)
- (8) When might a start-up be able to charge a high price for a new product? (4 marks)
- (9) Explain why it is important for a business to know what the costs of production are (4 marks)
- (10) How is total revenue calculated? (2 marks)
- (11) Using an example of each, distinguish between fixed and variable costs (4 marks)
- (12) What information is required to calculate the profit of a business? (4 marks)
- (13) Explain why it might be difficult for a new business to set its prices effectively (4 marks)
- (14) What is the relationship between variable costs and output? (2 marks)
- (15) Using an example, explain why are some costs said to be "semi-fixed"? (4 marks)
- (16) Explain why a start-up business is more likely to keep any profits earned in the business, rather than distribute them to the business owners (4 marks)
- (17) Discuss whether profit is the most important objective for a typical start-up business (8 marks)
- (18) Why might a new business only achieve relatively low sales from a product launched into a market? (4 marks)