

AE3-204 Introduction to Business

Inhoud

- 1. The Business environment 5
 - 1.1 The System and its environment..... 5
 - 1.2 The Macroenvironment..... 6
 - 1.3 The Microenvironment..... 6
 - 1.4 The Internal Environment 7
 - 1.5 The environmental set 7
 - 1.5 The value chain..... 7
 - 1.5 Conclusion 7
- 2 The working of competitive markets 8
 - 2.1 Supply and Demand 8
 - 2.1.1 The law of demand 8
 - 2.1.2 The law of supply..... 9
 - 2.1.3 Determinants of demand 9
 - 2.1.4 Determinants of supply 9
 - 2.1.4 Shortage and Surplus..... 9
 - 2.2 The concept of elasticity and consumer and producer surplus 10
 - 2.2.1 Elasticity..... 10
 - 2.2.2 Consumer and Producer Surplus..... 11
 - 2.2.3 Market failure..... 12
 - 2.3 Firm production, cost and revenue 12
 - 2.3.1 Production 13
- 3. Market structure: Perfect competition, monopoly and economic versus normal profit 13
- 4. Business organization 15
 - 4.1 Classification of business Organizations..... 15
 - 4.2 The sole trader 15
 - 4.2 Partnerships..... 16
 - 4.3 Limited companies 16
 - 4.4 Public limited companies..... 16
 - 4.5 Public sector 16
 - 4.5.1 State owned enterprises 16
 - 4.5.2 Regulation vs. competition..... 16
 - 4.5.2 Important Regulation landmark..... 16
 - 4.5.3 Cooperatives..... 17

5. Business Strategy: Organizational objectives, growth and scale	17
5.1 The objectives of organizations.....	17
5.1.1 Profit maximization	17
5.1.2 Market share maximization.....	18
5.1.3 Corporate growth	18
5.1.4 Satisficing.....	18
5.1.5 Survival	18
5.1.6 Personal objectives.....	18
5.1.7 Social objectives	18
5.1.8 Conclusion	18
5.2 Organizational size and growth.....	19
5.3 Small and medium-sized enterprises (SMEs)	19
5.4 Organizational Scale	19
5.5 Organizational life cycles.....	19
5.6 Types of organizational growth.....	19
5.6.1 Product / Market expansion.....	20
5.6.1 Portfolio planning.....	20
5.7 Organic vs. Acquisition growth.....	21
5.8 Horizontal and vertical integration	21
6. Financial reporting: Balance sheet	22
6.1 The Balance sheet	22
6.2 Short- and Long-term Classification	22
6.2.1 Assets.....	22
6.2.2 Liabilities.....	22
6.2.3 Equity.....	23
7. Product Costing systems	24
7.1 Housekeeping	24
7.1.1 The meaning of cost	24
7.1.2 Costs Reported in Financial statements.....	24
7.1.3 Stages of Production and Flow of Costs	24
7.2 Product costing systems.....	25
7.2.1 Cost management concepts: Different costs for different purposes.....	25
7.2.2 Committed Costs, opportunity Costs and Sunk Costs.....	26
7.2.3 Traceability of Resources.....	26

7.2.4 Throughput Costing	27
8. Activity-based Costing Systems	28
8.1 Traditional Costing Systems	28
8.2 Activity Based Costing System (ABC System)	28
8.3 Four steps in the ABC	29
8.3.1 Identify and Classify Activities	29
8.3.2 Estimate the Cost activities	29
8.3.3 Calculate Cost-Driver Rates for activities	30
8.3.4 Assign Activity Costs to Products.....	30
8.4 Product and Customer Profitability.....	30
8.4.1 Product Profitability	30
8.4.2 Customer Profitability	30
8.4.2 Estimating Costs of New products.....	30
8.5 ABC in Service and Merchandising companies.....	30
8.6 Benefits and Limitations.....	31

1. The Business environment

The objective of this first chapter is to show the elements that make up an organization in terms of macro, micro and internal environment and to appreciate the complexity and interdependence that exist in it. Further models are given in order to view the business environment.

1.1 The System and its environment

It can be rather difficult to precisely define the business system. However a good definition of the **business system** is for example the business organization whose performance is influenced by a whole range of phenomena in its environment. Further it needs to be noted that the system is an **open system** since it reacts to and acts on its surroundings.

Business organizations exist in order to process inputs from their environment into goods and services. This **transformation process** adds value to the product. Further it can be stated that the transformation process is not a steady process since it is depending on many different factors as it can be seen in **figure 1.1**.

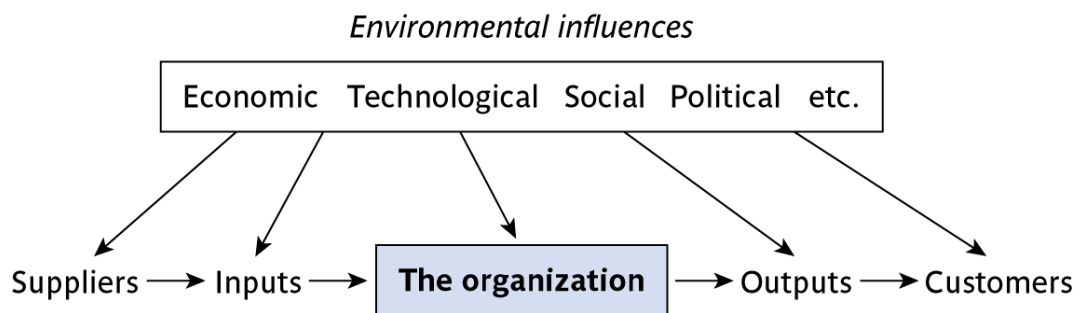


Figure 1.1 Environmental Influences

It is important to define, recognize and exploit changes in the social, political and technological environment since this can possible influence the business environment as well.

We have now looked at various factors that influence the business environment. We can further split up the different factors into three main categories:

1. The macroenvironment
2. The microenvironment
3. The internal environment

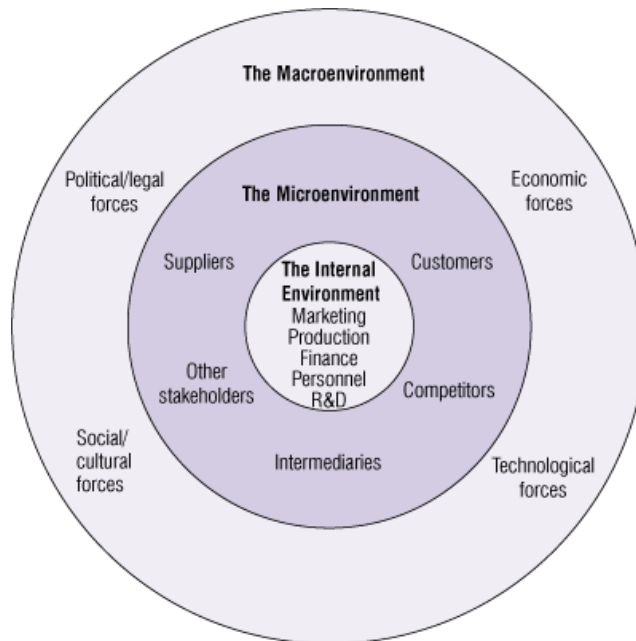


Figure 1.2: The principal elements of a business organization's environment

1.2 The Macroenvironment

The **macroenvironment** comprises general forces and trends rather than specific organizations. This can be the political, economic, social, demographic and technological or ecological environment. Those events are beyond the immediate environment but still affect the organization. The macroenvironment is the outer ring of **figure 1.2**

When looking at the various environments one can say that the **political environment** is one of the less predictable elements since governments can change within a few years and so does the politics. Further the political stability directly affects the economic stability. The **social and cultural** environment is important for companies which intend to do business in a country that is quite different from its own. The **demographic environment** has played a major role in the last decades of the 20th century in the western world since the average age has increased significantly while birth rates decreased. Further the **technological environment** can lead to rapid changes in markets which need to be understood by companies. Lastly **economic environment** plays a major role within the macroenvironment since consumption is dependent on income which is also dependent of the economic situation.

1.3 The Microenvironment

The microenvironment consists of all those organizations and individuals who directly or indirectly affect the activities of the organization. It consists of customers, intermediaries, suppliers and other stakeholders. The microenvironment is the inner ring of figure 1.2.

Once again let us have a look at the various parts of the microenvironment. The basis of every business are the **customers**. They are the fundament of every business. No customers means no business. An organization should know its customers so that it can predict what the customers will need in the future. When there are customers and a demand than **suppliers** are needed. They provide an organization with goods and services that are then transformed by an organization into added-value products for customers. In B2B marketing one can say that a supplier is likely to be the

customer of another company. Therefore it is important how suppliers, manufacturers and intermediaries work together to create value. Intermediaries are the link between an organization and its customers. Besides those basis elements it is possible to define others like the competitors, governments, pressure groups, the financial community and local communities.

1.4 The Internal Environment

The internal environment consists of the process and structures within an organization that facilitate or impedes its response to change in its external environment. Part of the internal environment are the marketing department and the production department.

1.5 The environmental set

When looking backwards we can see that the business environment cannot be compartmentalized. It is rather a dynamic and inter-related system. It is essential to consider an organizations “Environmental set” and its role in the value chain. Figure 1.3 shows an example of an environmental set.

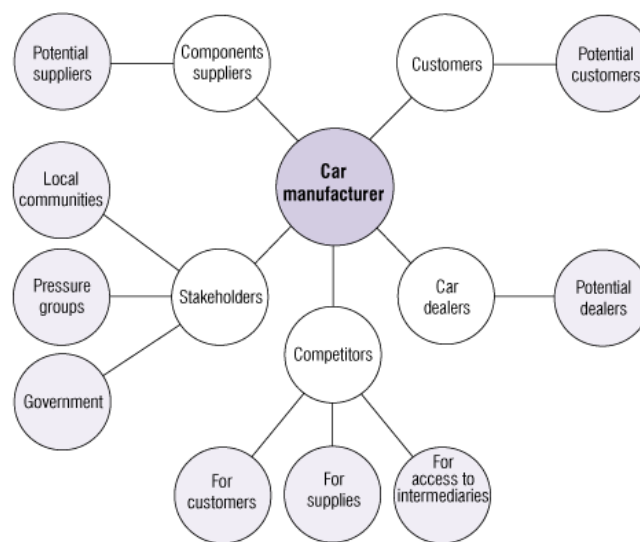


Figure 1.3: The Environmental set

The people and organization within a particular company’s business environment that are of particular relevance to it are sometimes referred to as its **environmental set**.

1.5 The value chain

As stated before, value is added during the transformation process. In this transformation process multiple organizations can be involved in adding value to a product. The members of a value chain are not equal. The power can shift over time through pressure groups and consumers.

1.5 Conclusion

As a conclusion to the first chapter we can say that monitoring and responding to the environmental change is essential for any business. Failure to do so can lead to decline and eventually the end of the business. This first chapter of the summary should have explained the concept of the business environment, the different levels, the complexity and interdependence of an organization’s business environment.

2 The working of competitive markets

The objective of this chapter is to introduce the economic model of supply and demand and explain the intuition behind the supply and demand relationships as well as the variables that can change these relationships. Further the term elasticity is introduced. Hereafter the benefits of market equilibrium through “consumer surplus” and “producer surplus” are outlined together with the relationship between production and costs and the relationship between sales and revenues. Lastly it is shown how profit maximization dictates that firms set production so that marginal cost equals marginal revenue.

2.1 Supply and Demand

Supply and demand is the most important model in all of economics. The model is used to provide insights into movements in price and output. The model assumes that there is a market where buyers and sellers get together to trade. Consumers are assumed to bring money to the market whereas producers are assumed to bring goods or services to the market.

Let's assume that there are many producers and consumers and nobody can dictate the price. There is a certain price where no consumer wishes buy more and no producer to sell more. This is called the **equilibrium price**. The amount that consumers want to buy at any particular price as the **quantity demanded** and the amount that firms want to sell at any particular price the **quantity provided**.

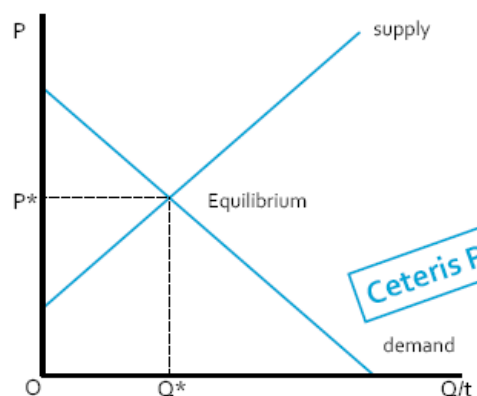


Figure 2.1: The supply and demand model

2.1.1 The law of demand

Let's have look at figure 2.1. The vertical axis is labeled P for price and the horizontal axis is labeled Q/t for quantity per unit time. It is the quantity demanded for a specific price over a period of time. There is a negative relationship between price and quantity demanded. For smaller prices there will be a higher demand. This negative relationship is called the **law of demand**. One reason for that is the **substitution effect**. When an article is too expensive one moves towards the good that is cheaper or away from the good that is more expensive. Additionally when prices increases it decreases your buying power causing you to buy less. Lastly there is the **law of diminishing marginal utility** which describes that the amount of additional happiness that you get from an additional unit falls with each additional unit) for example 3 instead of 2 holidays a year.

2.1.2 The law of supply

Let us again have a look at figure 2.1. For a higher price producers are willing to sell more goods. Therefore there is a positive relationship between price and quantity provided. This positive relationship is called **law of supply**. Now let us think about the logic that is behind this. Basically firms require higher prices to produce more output due to **increasing marginal costs**. In order to sell more the producer will have to increase his efforts to do so which will also increase in higher costs which will only be justified by higher prices.

2.1.3 Determinants of demand

So far we followed the term “ceteris paribus” meaning that all other parameters in demand and supply are constant. Now let us have a look at the factors which do play a role for the demand:

- **Taste:** Taste can be described as how many people like a product. A high level of taste means that it is a desired or fashion good leading to a higher demand for it.
- **Income:** The basic thinking is that a higher income will lead to a higher demand. Here it is necessary to differentiate between normal and inferior goods. For inferior goods like cheap Ryanair tickets the demand will increase for a lower income. For normal goods this is reversed.
- **Price of other goods:** The demand is also dependent on the pricing for other similar goods. Also here it is needed to see that there are two different kinds of other goods. Goods can be substitutes meaning that they can replace each other or they can be complements meaning that they are used together.
- **Population of potential buyers:** The amount of people that might possibly be interested in a product. For a larger population of potential buyers the demand will increase.
- **Expected price:** If in the near future the price of a product will increase then consumers will already buy the products in advance which is the so called stock-up effect.

2.1.4 Determinants of supply

Following the same logic from 2.1.3 we can define determinants that define supply while other parameters are held constant:

- **Price of inputs:** The costs that are needed to produce a certain good or service.
- **Technology:** Technology can enable goods to be produced in a far easier way thus increasing the supply.
- **Price of other potential outputs:** In case a supplier sees that there are products he can produce and where the price is higher he will probably choose for goods that are most profitable for him.
- **Number of sellers:** A higher amount of sellers leads to a higher competition thus raising the amount of supply.
- **Expected future price:** Just like with demand, higher expected future price will lead to a lower supply since sellers will wait for higher prices to sell their products.

2.1.4 Shortage and Surplus

If there is a change in supply or demand then without a change in the price of the good there will be a shortage or a surplus. **Shortage (Excess Demand)** is the condition where firms do not want to sell as many as consumers want to buy. **Surplus (Excess supply)** is the condition where firms want to sell

more than consumers want to buy. The concepts of shortage and surplus can also be seen in figure 2.4.

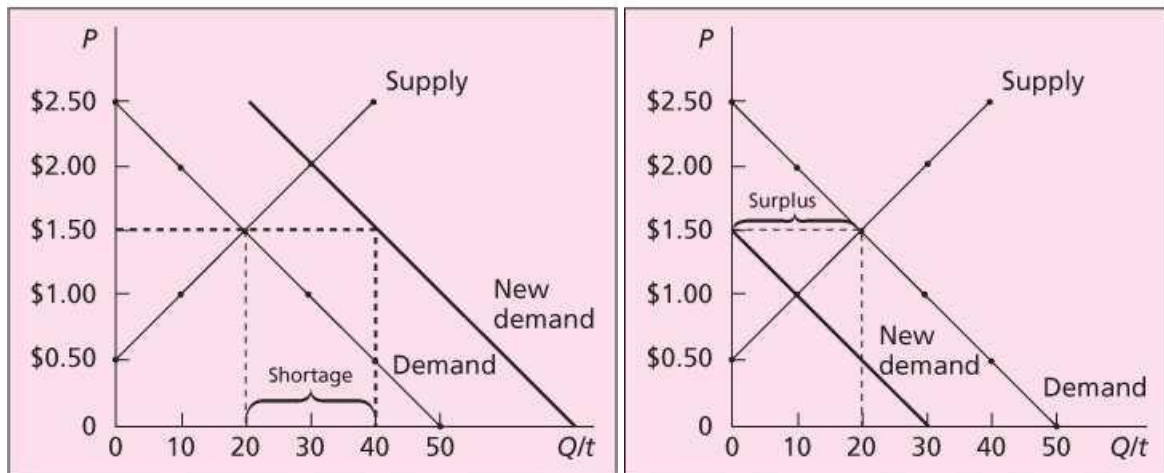


Figure 2.2: Shortage and Surplus

2.2 The concept of elasticity and consumer and producer surplus

In this part of the chapter the concept of elasticity will be outlined and the relationship with the appearance of the demand curve displayed. Lastly the terms consumer surplus and producer surplus are explained.

2.2.1 Elasticity

Elasticity can be defined as the responsiveness of quantity to a change in another variable or in equation form:

$$Elasticity = \frac{\% \Delta Q}{\% \Delta P} = \frac{\frac{\Delta Q}{Q}}{\frac{\Delta P}{P}}$$

Where % is the percentage, Δ the change, P is the price and Q the quantity.

For which it holds that:

- elastic: $\% \Delta Q > \% \Delta P$
- inelastic: $\% \Delta Q < \% \Delta P$
- unitary elastic: $\% \Delta Q = \% \Delta P$

The two most common referred to elasticities are the **price elasticity of demand** and the **price elasticity of supply**. Which are the responsiveness of quantity demanded to a change in price and the quantity supplied to a change in price. Further elasticities include the income elasticity which is the responsiveness of quantity to a change in income and the cross-price elasticity which is the responsiveness of quantity of one good to a change in the price of another good.

Let us have a look at some of the extreme cases. In case of no substitutes available the graph is inelastic since the demand will remain the same. For inexpensive goods there is also an inelastic graph since price increases do not have a large impact on the demand. For perfect inelasticity the price changes have no effect on quantity demanded. For perfect elasticity the price cannot change.

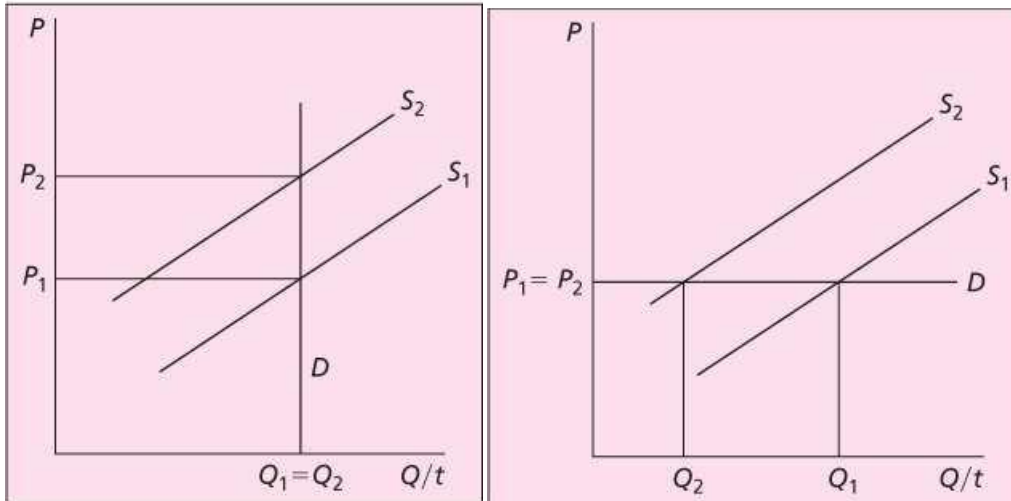


Figure 2.3: Perfectly inelasticity and perfectly elasticity

To show that elasticity is not equal to the slope we can have a look at the following example:

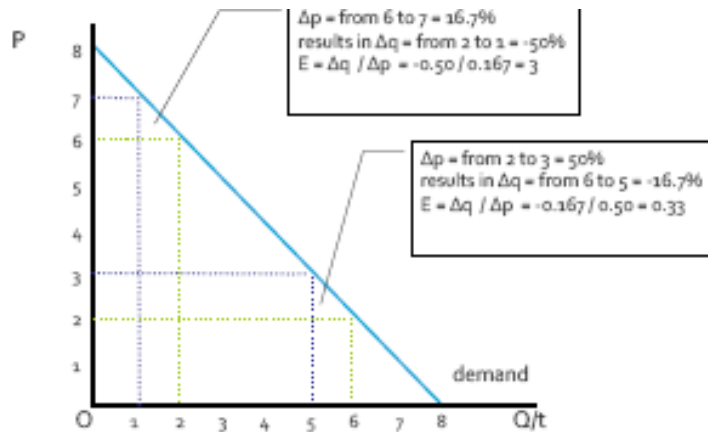


Figure 2.4: Example of elasticity calculation

2.2.2 Consumer and Producer Surplus

Lets have a look at figure 2.5. It shows that for a specific price quantity Q^* a producer demands a certain price P^* . Consumers that were willing to pay more than the price P^* but instead pay P^* therefore have a consumer surplus. Further the green area shows the producer surplus since this is the amount of extra money he will get for his goods.

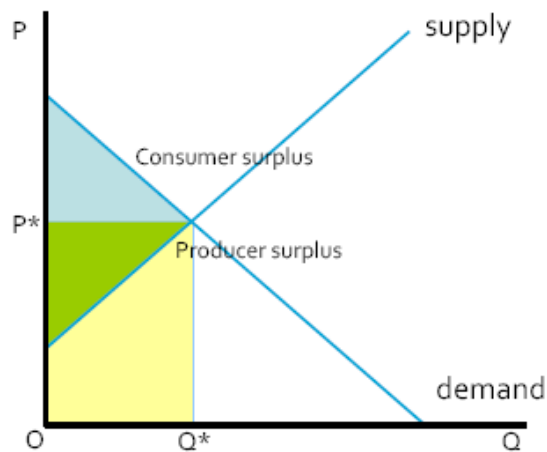


Figure 2.5: Consumer and producer surplus

2.2.3 Market failure

In figure 2.6 we can see different market situations. The axis show the exclusivity of goods and also the competition. In case the market outcome is not the economically efficient outcome it is called **market failure**.

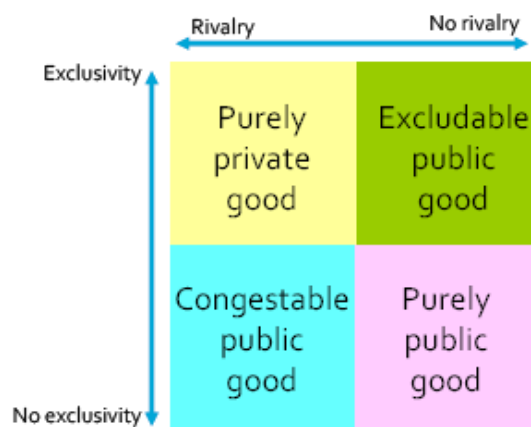


Figure 2.6: Overview of market situations

2.3 Firm production, cost and revenue

Let us start with introducing some basic concepts which should already be known. If a company sells good the total amount of money that comes in is called revenue, the expenses a company has to do are called costs. The difference between revenue and costs is the profit. Now there is also the term economic cost which stands for the things that have to be paid but also the forgone opportunities. Further there are accounting cost which are only those costs that must be explicitly paid by the owner of a business.

2.3.1 Production

In order to have an overview over the costs we need to know how much the products will cost us.

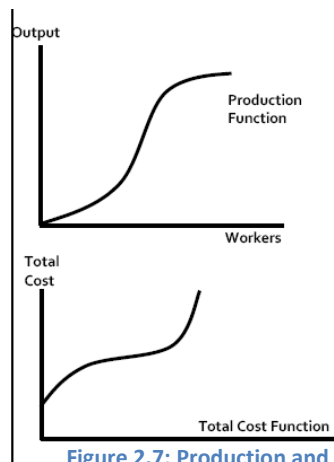


Figure 2.7: Production and cost function

For that we can setup a production function it will show us how much input will lead to how much output. From this it is possible to setup a cost function which will show the various amounts of production costs. Going back to the costs we can state that there are fixed inputs which are resources that do not change and variable inputs which can be easily changed. In order to work efficiently a division of labor is needed which divides tasks in a way that the least amount of time waste is created. When looking at the production output and the amount of workers we can see that at some stage the graph shows a decrease in momentum at a particular points. This is due to the diminishing return which refers to the point in which the addition of resources still increases the production but only at a decreasing rate.

So far we were able to show the terms by explaining situations via graphs. Now let us have a look at explanations with plain words. We have previously explained fixed and variable costs. Now lets consider the case where we produce one extra unit of an item. The extra costs that this item will produce are the marginal costs (MC). If we know take all the costs of the products that have been produced and divide it by the amount of products that have been produced then we end up with the average total cost (ATC). The same is done for the average variable cost (AVC) and the average fixed cost (AFC).

3. Market structure: Perfect competition, monopoly and economic versus normal profit

Let us start this chapter with an overview of the various market forms and its characteristic:

Characteristic	Perfect competition	Monopolistic competition	Oligopoly	Duopoly	Monopoly
Number of firms	Many	Several	Few	Two	One
Barriers to entry	None	Few	Substantial	Practically insurmountable	Insurmountable
Control over price	None	Very little	Good	Good	Very good
Product similarity	Identical	Similar but not identical	Similar or identical	Similar or identical	Not applicable

Figure 3.1: Market structure

The top axis shows the various forms of market systems. The table shows its characteristics as well. For a more detailed description you can refer to page 88 of the book.

In order to measure what system applies for a market we can use the concentration ratios HHI given by:

$$H = \sum_{i=1}^N s_i^2$$

In which s_i is the market share of the firm i in the market and N is the number of firms. The Herfindahl Index (HHI) ranges from $1/N$ to one where N is the number of firms in the market.

- A HHI index below 0.01 (or 100) indicates a highly competitive index.
- A HHI index below 0.1 (or 1,000) indicates an unconcentrated index.
- A HHI index between 0.1 to 0.18 (or 1,000 to 1,800) indicates moderate concentration.
- A HHI index above 0.18 (above 1,800) indicates high concentration

The last part that needs to be elaborated on are the profits. There is a difference between normal profits and economic profits. Normal profits refer to the level of profit that business owner could get in their next best alternative investment whereas economic profit is any profit above the normal profits. When looking at profits a producer needs to look at the short run and the long run. The short run describes the period of time where a firm cannot change things like plant and equipment whereas in the long run this is possible.

4. Business organization

This chapter will explain the diversity of organizational types of businesses. From that we will look at the advantages and disadvantages of sole trader, partnerships and limited companies. Hereafter the role of public-sector organizations and non-departmental public bodies will be discussed and lastly the actual effects of organizational form and size on responsiveness to the environmental change will be outlined. Differences in business organization can affect their behavior with employees, suppliers and employees

4.1 Classification of business Organizations

It is possible to classify business organizations by different attributes such as:

- Size (Turnover, assets, employees, geographical coverage)
- Ownership form (eg public, private, cooperative)
- Legal form (eg. Sole trader, limited company)
- Industry sector

It is possible to classify organizations by means of a diagram with two axis, one showing the size of the organization and secondly the degree of sector (private/public) as it can be seen in figure 4.1

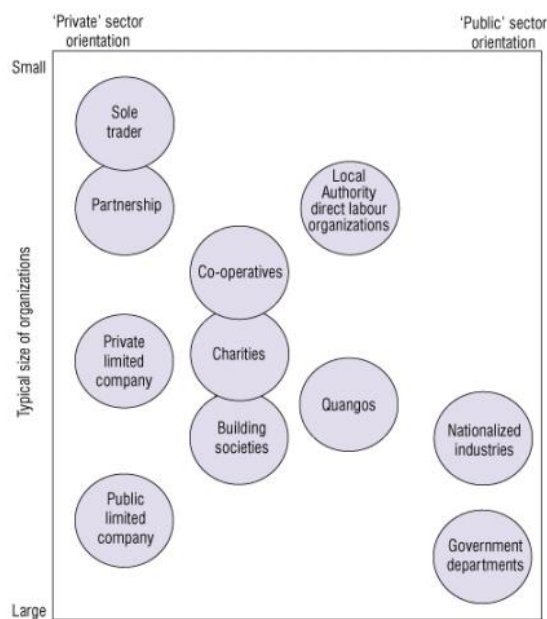


Figure 4.1: Classifying organisations

4.2 The sole trader

Let us now start with the first example of legal form: The sole trader. The sole trader is in most of the case a one-man business in which business owner and the business itself are the same legal entity which means that the owner is also liable for debts which his private resources. The advantage of a sole trader is that it is quite easy to setup that entity. In the UK roughly 80% of all businesses are sole traders, however they tend to remain small and some only pursued irrational goals.

In many cases work is outsourced by larger organizations to sole trader since for the sole trader this can lead to financial advantages further for the larger company it means that it does not have to pay health insurance and retirement funds.

4.2 Partnerships

Two or more person within a partnership can work together and combine their knowledge, skills and resources to form a more efficient business entity. Both partners are liable for debts of the partnership if not stated by the Partnership agreement. In most cases partnership are found among young professionals.

4.3 Limited companies

Limited companies evolved in history in the 19th century when it was recognized that the risk of losing their personal assets to cover the debts of a business was a big obstacle for investors. With limited companies there is a separate legal personality from the owner. The company is owned by shareholders who in theory exercise control over it. The legal responsibilities of the company have the directors. Besides the Memorandum and the Articles of Association further protection is needed for people who might deal with a limited company. An annual report needs to be produced every year and it needs to be stated what has happened to the capital during the previous year. In case of a liquidation (breaking up a business) other companies who still have a claim can go to court for a **receivship**. When a company goes into liquidation parts of the company can be sold in order to pay off for the debt.

4.4 Public limited companies

In the 1980's it was recognized that existing company legislation did not distinguish enough between small owner managed limited company and the large multinationals. Therefore the concept of a public limited company was created. Before the business can actually start a "business certificate" is needed from the Registrar of trading to show that it has a minimum share capital. It can offer shares and debentures to the public leading to an easier way of raising fresh capital. Further the term p.l.c. already stands for a higher reputation. However it is also more open to public control and monitoring

4.5 Public sector

In the past the government has been involved in providing goods and services that cannot realistically provided by market forces – like defence, police, basic health. In this sub-chapter we will have a look at the various forms of public organisations.

4.5.1 State owned enterprises

Many countries have a state owned industry sector. Let us focus on the Dutch aerospace market. As an example we can take the Schiphol Group which is owned by the Dutch Ministry of Finance, the municipality of Amsterdam and Rotterdam. It is 100% shareholder of Amsterdam Airport, Rotterdam airport and Lelystad Airport.

4.5.2 Regulation vs. competition

In many cases airlines were regarded as quasi – public utilities since it is important to shield the nascent industry from harsh economic forces such as competition. Further aviation creates important external benefits like highly prized jobs, encourages trade, tourism or use of aviation in case of emergency. Also safety level can be monitored through regulation. Lastly oligopolistic nature needs regulation in order to prevent price fixing and price wars.

4.5.2 Important Regulation landmark

In 1978 the airline deregulation act was put into reality which meant that US airlines could enter or exit any domestic market. The stated goals of the act are:

- the maintenance of safety as the highest priority in air commerce;
- placing maximum reliance on competition in providing air transportation services;
- the encouragement of air service at major urban areas through secondary or satellite airports;
- the avoidance of unreasonable industry concentration which would tend to allow one or more air carriers to unreasonably increase prices, reduce services, or exclude competition; and
- the encouragement of entry into air transportation markets by new air carriers, the encouragement of entry into additional markets by existing air carriers, and the continued strengthening of small air carriers.

This was a significant steps for the aerospace industry however before that many state owned companies were already released to the private sector in several ways.

4.5.3 Cooperatives

5. Business Strategy: Organizational objectives, growth and scale

This chapter will explain the nature of organizational objectives, formal and informal reasons for organizational growth and its patterns. Further the economies and diseconomies of scale and the methods of raising finance for expansion will be outlined.

5.1 The objectives of organizations

There is always an objective which exists for organizations to exist. The understanding of a company's goal is vital since that will affect purchases, sets prices and other market strategies. In general one can classify three main goals:

1. to make a profit for their owner
2. to maximize benefits for society
3. to maximize benefit to their member

Often organizations combine those goals like trading activities of charities.

5.1.1 Profit maximization

It is most common assumed that business organization try to maximize their profits by a combination of maximizing revenue and minimizing costs. The pursuit of profit maximization as the unifying characteristics is thought to be the main driver. However there are some limitations to that theory:

- Profit maximizations needs to be considered on a time line. There are different drivers for long term profit maximization and short term profit maximization. This can be reflected by research and development, new product development and so on.
- Often managers are not the actual owner of a company. Managers can rather pursue company goals which are more in line with their self-interest and are only sufficient to keep shareholders happy but don't actually lead to profit maximization.

- In practice it is difficult to quantify the relationship between production costs, selling prices etc. The inadequate knowledge of managers can lead to not reaching profit maximization.

5.1.2 Market share maximization

In market where a large correlation between market share and return on investment. This can lead to higher long term profits thereby neglecting the short term profits. Market share maximization can influence the business activities by for example cutting prices, increase in promotional expenditure and accepting short term losses.

5.1.3 Corporate growth

Corporate growth leads to more power and responsibility of individual managers. There are numerous advantages of corporate growth like higher salaries, career development however a growth and expansion can also lead to expansion in possibly unknown and unprofitable areas.

5.1.4 Satisficing

Since managers do not always directly benefit from increased profits, managers aim for satisfactory rather than maximum possible profits. Managers may pursue activities which satisfy their own individual needs such as better company cars. Therefore senior managers often receive contracts which are related to the profit performance. Also in terms of hiring people there might be a tendency to employ like-minded people rather than the type of employees who is most effective.

5.1.5 Survival

For many businesses the main problem is the short term cash which can lead to an end of the business even though the business has high potential for long term profits. Cash flow problems are due to a sudden increase in costs, fall in revenue or competitive pressure. When a business sets survival as a goal it will influence the decision process. For example companies would offer short term discount in order to get money back in, this might not be beneficial on the long run though.

5.1.6 Personal objectives

Many smaller businesses are set up by individuals and they do not follow logical patterns but rather emotional ones. Individuals may setup a business which relates to their hobby or personal interest.

5.1.7 Social objectives

Besides financial objectives companies can have social objectives as well. Their social objective may result in buying supplies from disadvantaged groups even though it is not the most profitable solutions.

5.1.8 Conclusion

It is obvious now that objectives are rather diverse and many organizations will follow more than just one goal. Therefore one can look at the Companies Acts for limited companies which will state its objective. Further many companies use a mission state to show what the objectives are.

5.2 Organizational size and growth

The majority of the companies in the market are small-scale organisations. However organisations can grow due to various reasons:

- The organisation's markets may be growing
- A critical mass may be necessary
- Growth may stimulate staff morale
- Growth can bring greater status and promotion prospects to managers
- Growth by acquisition may limit the amount of competition in a market

5.3 Small and medium-sized enterprises (SMEs)

The term SMEs refers to the small and medium sized companies within an industry. For different industries the amount of employees may differ. It is argued that they are important for an economy since a share of them grows into large companies. Also due to their size they are more rigid they can pick up new technologies and trends quicker than large companies. Often they are used for outsourcing purpose by larger organizations.

5.4 Organizational Scale

There has always been a debate whether there is an ideal size for business organizations. This sub-chapter will give an overview about the advantages and disadvantages.

In many industries economies of scale play an important role during production process. For example for declining unit costs the volume will increase, further the size of a business might be crucial for some industry sectors since more purchase power can lead to higher discounts. It can be said is that economies of scale affect production, promotion, distribution and recruitment. When looking at economies of scope it shows that a big company can undertake activities which would be difficult for smaller ones.

5.5 Organizational life cycles

In general one can say that a company goes through a life cycle. When looking at that life cycle we can divide the life of a company into various segments:

1. Entrepreneurial: In that stage an individual identifies a market need and offers a product to a small number of people.
2. Multisite rationalization: The individual starts to add extra facilities. The organizations also becomes more and more stable. Franchising is considered.
3. Growth: Active expansion through acquisition, franchising, licensing concepts and so on.
4. Maturity: The number of expansions decrease which is due to changing demographics, changing needs of consumers, increased competition and removal of older products by new ones.
5. Decline / Regeneration: In case of no new products the company might decline.

5.6 Types of organizational growth

When analyzing growth one can distinguish between the **objects of growth** which are the terms of the development of new markets and also the **organizational issues** how growth can be achieved.

5.6.1 Product / Market expansion

One can look at markets and products in order to analyze an organizations growth. Products and markets are analysed by their novelty to a company. This identifies four options as it can be seen in figure 5.1.

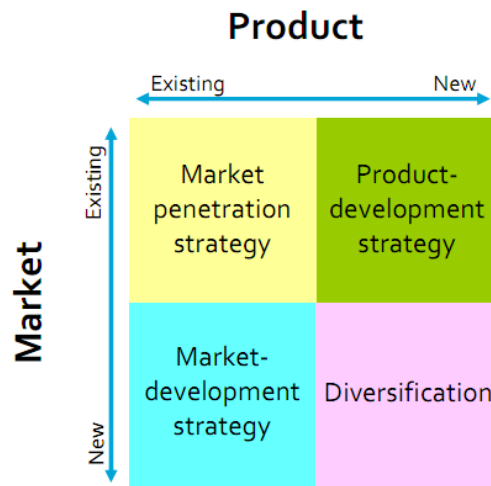


Figure 5.1: Product and market expansion

1. Market-penetration strategy: This strategy focuses on existing products but increasing the sales within a market.
2. Market-development strategy: This strategy uses existing products but it searches for new possible consumers. The risk is that consumers might have different opinions than in the core business.
3. Product development strategy: A company may choose to develop new products for already existing markets. The company knows about the market but the new product area might bear some risks.
4. Diversification: A company can develop new products for a new market. There are high risk involve since the company does not know the market nor the product area.

5.6.1 Portfolio planning

We have talked about life cycle before in this chapter. In order to prevent the decline of a company one can use portfolio planning which has different growth and market share rates.

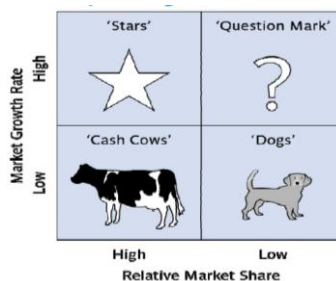


Figure 5.2: portfolio planning

- Questions marks: They identify the products which are growing quickly but still have a low market penetration. They might have potential for the future. Due to the development they also consume a lot of cash.

- Stars: Stars generate large amounts of cash since they have a high market penetration and high growth rate. Since they are still growing they also use a lot of cash for promotions.
- Cash cows: Cash cows have been established in the market place and generate more money than what they consume. Dogs have low market growth rates and low market shares. They don't consume nor create a lot of cash.

5.7 Organic vs. Acquisition growth

Organic growth is considered to be the more natural pattern of growth. Organic growth can be achieved by tackling one market segment at a time. For the case that new market opportunities arise where the company does not have the specialized resources they might consider acquiring a business. The risks of an acquisition is the fact that employees and their know-how might leave the company as well.

Organic Growth	Growth by acquisition
<ul style="list-style-type: none"> • Less risky • More sustainable • Successful growth provides basis for further growth • May be too slow in fast changing markets 	<ul style="list-style-type: none"> • More rapid • Allows fast exploitation of economies of scale • More risk

5.8 Horizontal and vertical integration

6. Financial reporting: Balance sheet

The Learning objective for this chapter is to understand the terminology and structure of a balance sheet and how it can indicate potential weaknesses and strengths.

6.1 The Balance sheet

A balance sheet shows the resources the business controls which can be used to create wealth (assets) it also shows where the resources are derived from for example owners (equity) or lenders (liabilities).

Accountants often talk about the “balance sheet equation” which can be given in various ways:

- $\text{Assets} = \text{liabilities} + \text{equity}$ → It shows the total assets and how they are financed.
- $\text{Assets} - \text{liabilities} = \text{Equity}$ → It emphasizes the amount of equity

6.2 Short- and Long-term Classification

Since a balance sheet has a standard format it is easy to compare two companies with each other. However assets and liabilities can be classified as long term or short term. In general one can say that anything that is intended to be around for more than a year is long term and anything that changes within a year is short term.

6.2.1 Assets

An asset is a resource controlled by a business as a result of past events and from which future economic benefits are expected.

Long-term assets are also called non-current assets or fixed assets. The main categories for non-current assets are:

- Intangible assets: Patents, trademarks or licenses
- Property, plant and equipment: Land and building, machinery and so on
- Financial assets or investments: Shares in other companies or loans that have been made.

Current assets in contrast are short term since they include cash and any assets intended to become cash within year. They include

- Inventories or stocks: merchandise, production supplies, materials etc
- Trade receivables: Money owed to the business by customers and others
- Investments: those which are not fixed assets
- Prepayments: Expenses such as rent or insurance paid before balance sheet date
- Cash

6.2.2 Liabilities

Just like assets, liabilities can be categorized as current and non-current. A **liability** is a present obligation arising from past transactions which are expected to be paid.

There are current liabilities which have to be paid within a year such as:

- trade payables
- corporation tax payable

- accrued charges
- bank overdraft

Also there are non-current liabilities such as mortgages and debentures.

6.2.3 Equity

Equity is the assets less the liabilities and is the owner's interest in the business. Equity includes:

- share capital
- share premium
- retained profits
- other reserves such as revaluation reserve

6.3 Financial strengths and weakness

7. Product Costing systems

The learning objectives for this chapter can be summarized as follows:

- Explain the role of product costs, period costs, and expenses in financial statements.
- Prepare an income statement and a schedule of cost of goods manufactured and sold.
- List the components of manufacturing cost, and diagram their flow through a manufacturing process.
- Explain how unit-level, variable, and fixed costs differ.
- Understand the concepts of opportunity costs, sunk costs, committed costs, direct costs, and indirect costs.
- Prepare income statement using absorption, variable, and throughput costing.
- Reconcile income under absorption, variable, and throughput costing.
- Discuss the advantages and disadvantages of absorption, variable, and throughput costing.

7.1 Housekeeping

7.1.1 The meaning of cost

Cost can be defined as the sacrifice made to achieve a particular purpose. However cost can have different meanings, therefore it is necessary to look into the various forms of costs.

A product cost is the cost assigned to goods that were either purchased or manufactured for resale. They are assigned to inventory and cost of goods sold. In contrast to that there are the period costs which are recognized as expenses in the same time period where they occur.

7.1.2 Costs Reported in Financial statements

Before looking at the actual financial statements it is needed to categorize a company. A company can be a service firm which provides service that is consumed when produced and further has no inventories. A company could also be a retailer which buys and sells finished goods. Lastly there are the manufacturers which buy raw material and produce and sell finished goods.

For manufacturing companies the major branches of cost can now be split up as follows:

There are **the direct material costs** which consist of raw materials, components and other parts that can be traced to a specific product. Secondly there are the **direct labor costs** which consist of payment and benefits for those employees who convert direct materials into finished products. And lastly there is the **manufacturing overhead** which consists of indirect material, indirect labor and other overhead. In some cases an extra category is used for support or service department.

A further distinction can be made between prime and conversion costs. Prime costs include direct materials and direct labor costs. Conversion costs include the direct labor and manufacturing overhead.

7.1.3 Stages of Production and Flow of Costs

When looking at the production one can classify three stages:

1. Raw material: Material that has not entered production

2. Work in process: Refers to partially completed product being worked on.
3. Finished goods: Products that have been finished and are ready for sale.

Manufacturing companies use cost-accounting systems in order to measure the resources in the three production stages. Every inventory has a beginning inventory and an ending inventory. During a period of time resources are added or taken away. The costs added are called inventoriable costs. The figure below shows the flow of the production costs.

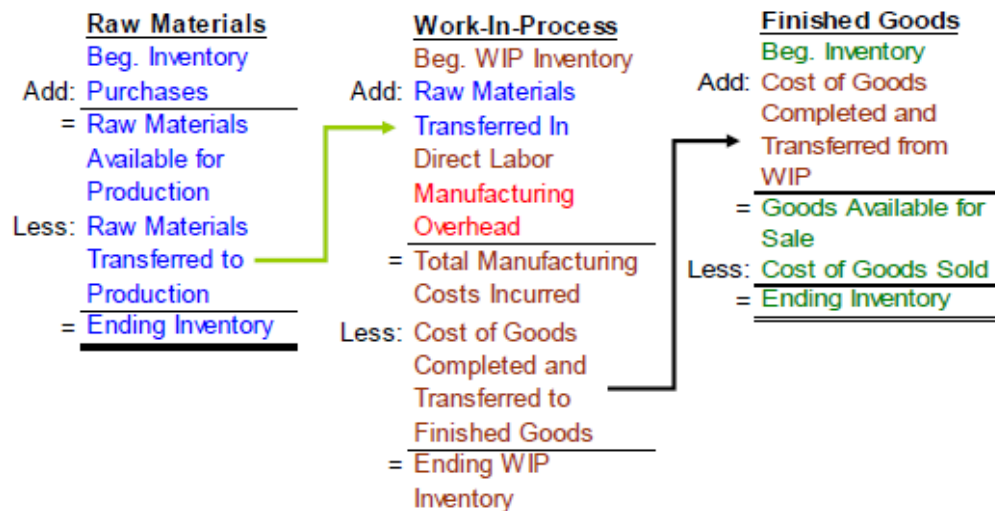


Figure 7.1: Flow of Costs

For the service sector there is no inventory therefore the costs of providing the service can be identified and measured just as they occur in manufacturing industries. Managing and tracking the costs associated with value chain activities can point to opportunities for improvement.

7.2 Product costing systems

7.2.1 Cost management concepts: Different costs for different purposes

An understanding of costs is absolutely critical to cost management. First we will have a look at **cost drivers**. One of the most important cost concepts is the way a cost changes in relation to changes in organizations activity. **Activity** is any discrete task that an organization undertakes to make or deliver a good or service. A **cost driver** is some characteristic of the activity that causes costs to be incurred.

The next aspect of costs that we will have a look at is the cost behavior. It means how a cost will react to changes in the level of business activity. There are variable costs which change when the activity level changes and also there are fixed costs which remain unchanged when activity level changes.

Cost	In Total	Per Unit
Variable	Changes proportionally with changes in activity within the relevant range	Remains constant for each additional unit as long as activity is in the relevant range
Fixed	Remain the same when activity changes within the relevant range	The per unit amount changes each time the level of activity changes due to the fixed nature of the related costs.

Table 1: Summary of Cost behaviour

Depending of the view onto a product it might be possible to say that material costs are fixed costs or variable costs. Therefore it is needed to setup a cost hierarchy. The five different level are as follows:

1. Unit level costs: Incurred for every unit of product manufactured or service produced.
2. Batch level costs are incurred for every batch of product or service produced
3. Product level costs are incurred for each line of product or service
4. Customer level costs are incurred for specific customers
5. Facility level costs are incurred to maintain the organizations overall facility and infrastructure.

7.2.2 Committed Costs, opportunity Costs and Sunk Costs

All decision a management does in terms of manufacturing will lead to costs. Since the costs are variable with regard to the decision made, no future costs can be regarded as fixed costs.

A **committed cost** is a cost for which management has taken actions that result in some level of commitment to incur in cost. Committed costs are long term obligations and are difficult to change in the short term (Rental of building etc). In contrast to that is the **discretionary costs** which are easier to alter in the short term by current management decisions (advertising, R&D etc). Another cost is the **opportunity costs** which is defined as the potential benefit that is given up when one alternative is selected over another. **Sunk costs** are past payment made for resources that cannot be changed by any current or future decision.

7.2.3 Traceability of Resources

Another important aspect of cost incurrent is the ease with which the cost of a resource can be traced to a decision or set of decisions. In some cases seeing how specific decision have caused the acquisition and use of specific resources is easy. In that case direct costs can be traced easily and conveniently to a product or department. Indirect costs are costs that need to be allocated before they can be assign to a product or department. As an example the cost of paint in an assembly line can be directly traced back to the aircraft that receive the paint. As an example for indirect cost it can be said that advertising for an airline in general in indirect cost for a given flight route.

The term **absorption costing** refers to a system of accounting for costs in which both fixed and variable production costs are included in product costs. In contrast to that variable costing takes into account only the variable costs of production to products.

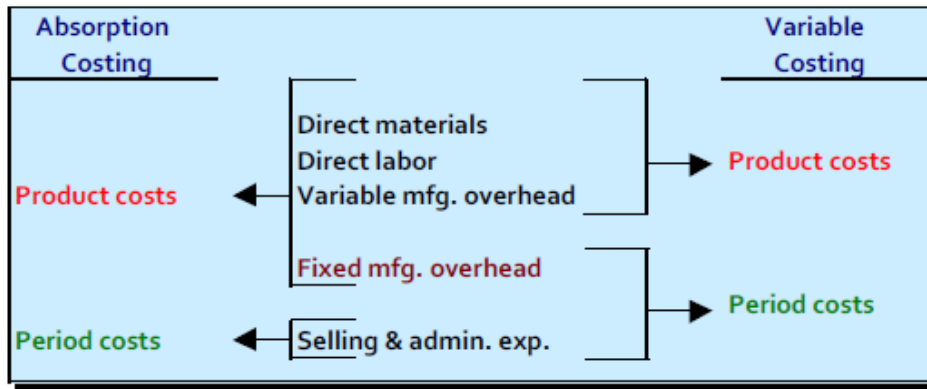


Figure 7.2: Costing Comparison

Summing up it can be said that for absorption costing all manufacturing costs must be assigned to products to properly match revenues and costs. For variable costing fixed costs are not really the costs of any particular product. Further for absorption costing depreciation, taxes insurance and salaries are just as essential to products as variable costs are. For variable costing these are capacity costs and will be incurred even if nothing is produced. Absorption costing products can be misleading for decision making but eventually the absorption costs appear on the external reports.

7.2.4 Throughput Costing

In recent years some managers have been advocating throughput costing as an alternative to either absorption or variable costing. Throughput costing assigns the unit-level spending for direct costs. Indirect, past or committed costs are left out since including them would create improper incentives to managers to drive down the average costs.

Example
 In an automated process direct material may be the only unit-level cost and so is the only product cost. All other manufacturing costs are expensed as period costs.



Absorption costing: Excess inventory would include more fixed production costs, so that gross income for the period would be artificially higher. An unethical manager would have an incentive to “produce for inventory” at the end of a period, in order to obtain a better looking bottom line. An

unethical manager would have an incentive to “produce for inventory” at the end of a period, in order to obtain a better looking bottom line.

8. Activity-based Costing Systems

This chapter deals with activity-based costing systems. In order to understand ABC systems we first need to understand how traditional costing systems could lead to under- or overcosting of products. Hereafter the four steps of ABC systems are explained together with the identification of the five different levels of resources and activities used in production processes. Then an estimation for costs of activities will be given and the costdriver rate will be calculated. The last parts will involve assigning activity costs to goods, analyzing the profitability of products and lastly apply ABC to services and merchandising companies.

8.1 Traditional Costing Systems

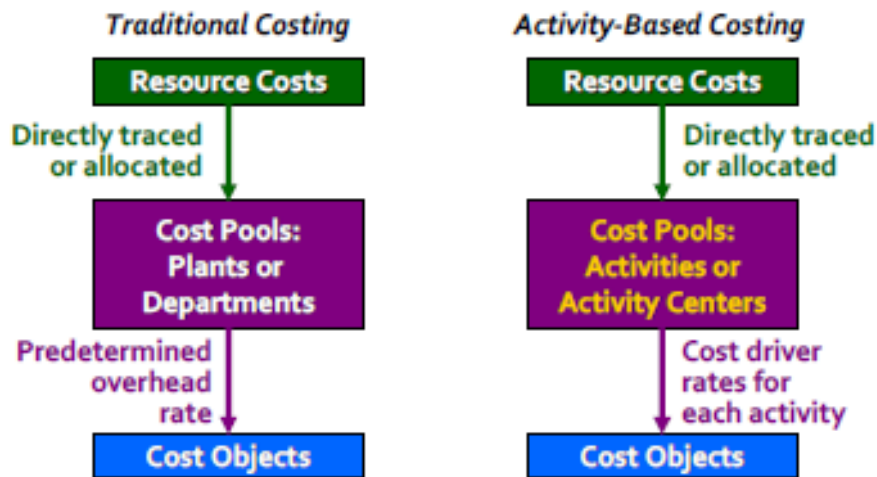
Many companies still use traditional costing systems in which indirect costs such as supervisors salaries and utilities are not traced directly to the product. Instead companies allocate indirect costs to the product using an allocation base such as direct labor hours or machine hours. One result of that is that undercosting and overcosting occurs which means that some products do not have the correspondent costs assigned to it. A product might actually not make any profits but this is not seen due to undercosting.

When refining a traditional costing system it can be split up into three main key points:

1. Costs should be traced directly to goods or services if possible.
2. Indirect costs should be categorized into cost pools which allows later on to trace back those indirect costs more precisely.
3. Using cost allocation to assign indirect costs to products. In general cost allocation is the process of assigning indirect costs to products or organizational units.

8.2 Activity Based Costing System (ABC System)

ABC is a method that identifies the activities performed within the organization as it delivers its goods and services. It is used to establish product costs for managerial decision-making purposes such as whether to continue offering a product. ABC is a good supplement to our traditional cost system since both manufacturing and non manufacturing costs may be assigned to products. The following graphics gives a rough idea about ABC compared with traditional costing.



8.3 Four steps in the ABC

The ABC system can be split up into four steps which show how to perform ABC.

8.3.1 Identify and Classify Activities

Analyzing all resources and activities needed to produce and support a company's products and services is made easier by recognizing that these resources and activities support different levels of the company. Based on the five level hierarchy it can be listed as follows:

1. Unit-Level activities: Resources acquired and activities performed for individual units of a product.
2. Batch-Level activities: Resources acquired and activities performed for a group or batch of similar products or services.
3. Product-Level activities: Resources acquired and activities performed to produce and sell a specific product or service.
4. Customer-Level activities: Resources acquired and activities performed to serve specific customers.
5. Facility-Level activities: Resources acquired and activities performed to provide general capacity to produce goods or services.

In order to identify and classify those activities different approaches can be done. First of all there is the top down approach which terms people from top levels of management to develop activity dictionaries for its operations. Secondly there is the interview or participative approach in which ABC teams include or interview operating employees. Lastly the recycling approach can be used which reuses documentation of process used for other purposes.

8.3.2 Estimate the Cost activities

This step involves the estimation of costs of the activities that were identified in step 1. Employees are asked to indicate how much time they spent on working on various activities. Also accounting records for recorded cost information are checked.

8.3.3 Calculate Cost-Driver Rates for activities

A cost-driver rate is the estimated cost of resource consumption per unit of the cost driver for each activity. A cost driver is a characteristic of an activity or event that causes that activity or event to cause costs. A cost-driver base is the base used to trace or assign cost activities.

In order to calculate cost-driver rates the activity costs and the activity volume are needed. Then the cost driver rate can be determined from: $\frac{\text{Activity Cost}}{\text{Activity Volume}} = \text{Cost} - \text{Driver Rate}$.

As an example a company employs 4 employees. Salaries and cost for the department total are 360.000 Euros per year. The company produces 500.000 units per year. The cost-driver rate per unit is then 360.000 divided by 500.000 which is 0.72 Euros per unit.

When estimating the cost of an activity only the costs associated with the product should be used (practical capacity). The cost of unused capacity should not be applied to products.

8.3.4 Assign Activity Costs to Products

The last step involves the assignment of activity costs to products which is done in the following steps:

1. Identification of all activities related to a given product or service.
2. Determination of how many units of each activity are used per unit of product.
3. Assigning costs to products using the cost-driver rates for each activity

8.4 Product and Customer Profitability

This part of the chapter deals with measurements for both product and customer profitability. It is central to managing products and customers and deciding whether to drop existing products or customers.

8.4.1 Product Profitability

The price of Product A, the deluxe model, should probably be increased. Customers who buy deluxe models may buy based on features instead of price. The price of Product B, the standard model, may be too high. Customers who buy standard models are price sensitive. Decreasing the price would increase volume, possibly resulting in more income.

8.4.2 Customer Profitability

Customer costing analyzes the costs of activities to serve specific customers. Customer profitability analysis identifies the costs and benefits of serving specific customers or customer types in order to improve an organizations overall profitability.

8.4.2 Estimating Costs of New products

ABC analysis can be applied onto present product lines to propose costing for new products. This is valid as long as the activities involved with the new products are similar to those for the present products.

8.5 ABC in Service and Merchandising companies

Basically the process is exactly the same as for manufacturing.

1. Identify and classify the activities related to the company's products or services.

2. Estimate the cost of each activity identified in
3. Calculate a cost-driver rate for each activity.
1. Assign activity costs to products using the relevant cost-driver rates.

8.6 Benefits and Limitations

The benefits are that ABC is more accurate and therefore leads to better pricing decisions. Also the activities driving costs are more accurately measured. Lastly managers gain easier access to the relevant costs. The downside is that ABC is very expensive to develop and implement. Lastly it is time consuming to maintain.

Reasons for using ABC are:

- Indirect costs are significant in proportion to direct costs.
- Goods are complex, requiring many inputs and processes.
- Complex, low-volume products are profitable while standard, high-volume products are not.
- Different departments believe costs are assigned inaccurately.
- The company loses bids it thought were low, and wins bids it thought were high.
- Operations have changed significantly, but the costing system has not changed.
- Introduction of new models result in higher sales, apparent profits per unit, but an overall income decline