Business Management Notes

Uzen

February 9th, 2020

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Business Organization and Environment

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Functions and Evolution of Human Resource Management

2.0.1 Human Resources Planning

Work force planning is the method used by a business to forecast how many and what type of employees are needed now and in the future. Human Resource department is often in charge of this.

There is two types of workforce planning: short term and long term planning. Short term planning work on fulfilling immediate needs such as current vacancies. Long term planning work on planning to accommodate strategic change in the organization.

There is two major activities in terms of workplace planning. The first task is the gathering of information HR needs of a company. This means data about the company's population, turnover rates (refer to 2.0.2), employee shortages, and strategic goals. The second activity is developing the response HR need to take.

A work force plan should follow the steps below:

- Assess current employees
- Analyze demand for employees
- Analyze the supply of employees
- Compare the demand and supply data
- Develop and implement the work force plan

Forecasting the demand for employees

To predict the future employee need of a firm, we would use several different approaches:

- Past Data
- Productivity of Workers
- Management Knowledge
- Calculating staff turnover

However, there are many factors that can influence the demand for employees. Several are listed below:

- Change in demand of goods and services
- Technology developments
- Change in business goals

- change in organization structure
- change in production techniques

Thus, it is often worthwhile to take not just use past data to evaluate the demand for employees. Many times, knowledge from employees and managers are just as important.

Analyzing the Supply of Employees

After forecasting the demand of employees, the company need to consider the important question: how can we find the right employees? The supply of internal employees should be analyzed by looking at the number of employees and their function, their age, and other important characteristics. The supply of external employees should be analyzed by looking at the market of recruitment. Recruiting internally and externally have its advantages and disadvantages.

Internal labor is sources of labor that is already present in a company.
External labor is sources of labor that need to be hired.

Internal Employees Supply

This will likely depends on the company's stance on:

- Internal Promotion
- Staff Development
- Labor Turnover
- Legal conditions for redundancy and dismissal

External Employee Supply

The business need to analyze a range of local and national factors:

- Housing and Transport
- Level of Competition
- Rate of Unemployment
- Government Training and Subsidies
- Skill available in the region
- Population and demographics
- Cost of recruitment

2.0.2 Labor Turnover

Labor Turnover is the percentage of the workforce that leaves every year. There are many reasons in which an employee may leave: They can be fired, sick, redundant.

To measure employee turnover, we use a equation:

$$\texttt{Labor Turnover} = \frac{\texttt{Number of Employees Leaving}}{\texttt{Number of Employees in the business}} \cdot 100 \tag{2.1}$$

Different types of company have different labor turnover rates. However, in general, the higher the labor turnover, the more troubling it is.

Avoidable Causes of Employee Leaving

There are some avoidable causes for employee leaving:

- Dissatisfaction with payment
- Poor Working Environment
- Job Dissatisfaction
- Human Resource Policies
- Lack of Facilities
- Dissatisfaction with Working Time

Unavoidable Cause of Employees Leaving

- Family Circumstance
- Physical Reasons
- Marriage
- Birth of Children
- Retirement
- Dismissal
- Redundancy

Cost of Labor Turnover

- Recruitment
- Loss of Productivity
- Inefficiency
- Training
- Reputation of Company

There are numerous disadvantage of a high Labor Turnover. Thus, it is in the best interest of the company to keep Labor Turnover low.

2.0.3 Internal and External Factors

Factors that can affect workforce planning can be grouped into two factors: **External** and **Internal** factors.

External Factors

- Competition
- Payment
- Legislation
- Technology Advancements
- Population and Demographics
- Economic Situation
- Availability of Skills
- Government Training and Subsidies

Internal Factors

- Budget
- Policy on Promotion
- Working Practice

2.0.4 Recruitment Process

The recruitment process is very important. A bad recruitment process may lead to a high Labor Turnover. A common recruitment process looks like this:

1. Job Analysis
2. Job Description
3. Person Specification
4. Job Evaluation
5. Job Advertisement
6. Selection

Job Analysis

Job Analysis looks at what the job entails. Such as what skills are required, how much training is needed, what are the tasks needed completion.

Job Description

Job description is a way to *pitch* your job. To explain the basic picture of a job to the candidates.

Person Specification

Person specification defines the qualities of an individual in order to take the job. These specifications can be skills or culture.

Job Evaluation

Job Evaluation allows for managers to decide the value of the job. This sets the pay for the job.

Job Advertisement

This is when a company promote a job, internally or externally. Internally, this would be a promotion. Externally, this would be an advertisement.

Selection

This would be the stage where the candidate is chosen. Often, there are different ways to carry out this stage. Some commonly used methods will be listed below:

- Application
- Job Interview
- Testing
- Job Offer

2.0.5 Internal and External Recruitment

Internal Recruitment

There are several advantages and disadvantage of Internal Recruitment.

Advantages

- Shorter training
- Reuse existing resources
- Managers are familiar with employee
- Cheaper
- Motivating to other employees
- Retains valuable employees

Disadvantages

- Limited applicants
- Limit to better employees outside
- Vacancy is created, and need to be filled
- Less new ideas are brought into an organization
- May cause conflict in organization

External Recruitment

There are several advantages and disadvantage of External Recruitment.

Advantages

- Brings new idea to the table
- Encourage existing staff to update their skills
- Promotes change
- Offer greater choice

Disadvantages

- New employees may not fit in
- Demotivated existing staff
- Costly and time consuming
- Require training
- Higher risk of unsuitable employment

2.0.6 Types of Training

Training is very important for a business. It brings many benefits, but is often overlooked.

Benefits of Training

- Increase productivity
- Can replace other in an organization restructure
- Catch up to new technology
- Increase employee confidence
- Increase job satisfaction
- Increase chance of promotion
- Give a competitive advantage to the company

Need for Training

There are three levels of training needs.

Organization Level: A change in the company structure may require the employees to trained to achieve new objectives.

Department Level: Some employees may need to be trained due to specifics reasons. Such as absences, production levels, or customer complaints.

Individual Level: Some employee may request additional training themselves. Perhaps to keep up to date with the industry, or to support a new role.

Cost of Training

Other than the expenses of teaching an employee, managers would also need to consider the time taken away from the job.

On the Job Training

On the job training is a type of training given to the new employee during work.

Induction Training: Training at the start of a job.

Coaching: Supervisor guides an employee through a process.

Mentoring: Employee is paired with a more experienced worker.

Job Rotation: Employee works in different job positions in the company.

Apprenticeship: Trainees work under supervision for a long period of time

In-house Course: Company organized training.

E-Learning: Use of multi-media to teach employee new skills.

Off-the-job Training

Off the job training minimizes distraction, but the skills learned may not relate to the job as closely.

Lecture and Conferences: Verbal presentation involved with a large audience.

Vestibule Training: Training employees using a prototype work environment.

Simulation: Training involving specialized equipment that simulates working environment.

Case Studies: Use existing examples and stories to discuss with employees. This often focuses on decision making.

Role-playing: Trainees play a role without rehearsal. This often focus on inter person relationships.

Advantage vs Disadvantages

On the job training is cheaper and more related to the work. However, it disrupts the work flow of both the employee and the mentor.

Off the job training is more organized, but less relevant to the job. It is also more expensive.

2.0.7 Types Appraisal

- Performance appraisal by supervisor
- Appraisal by a manager up in the hierachy
- Formative appraisal
- Summative appraisal
- Self-appraisal
- 360-degree appraisal
- Management by objectives

2.0.8 Dismissal and Redundancy

Lawful reasons for dismissal

Misconduct: cases such as violence, discrimination, theft, or fraud.

Capability: Poor performance after repeated attempts of aid.

Steps to dismissal

1. Full investigation
2. Complete check
3. Written evidence
4. Meeting with employee
5. Written notice

Types of Redundacy

- Job Redundancy
- Work place redundancy
- Employee redundancy

Common Redundancy steps

1. Plan redundancy
2. Identify Alternative
3. Prepare a schedule
4. Inform Employee
5. Redundancy Selection
6. Individual Consultation

2.0.9 Work Patterns and Practices

Part-Time Work

Employees work only part of the working time. Often done be individuals with many jobs, or have to be working on something else (education).

Part time worker's wages are cheaper and they are easier to replace. They get less benefits and are more flexible. However, part time workers have less motivation and loyalty. There is also a higher training cost.

Temporary Employment

This is when employees are employed only for a short period of time.

Temporary workers receive higher wages, and are more flexible. But they may lack loyalty and motivation.

Flextime Employment

Employees can work with a flexible time schedule.

This allows for more employee work satisfaction. But creates difficulty with scheduling.

Teleworking

Employees can work at a separately from the company.

This reduce cost of office space and facilities. It increases employee satisfaction, allows more working time. But may be detrimental to collaboration, and unsuitable for many types of jobs.

Portfolio Workers

These workers can work for many companies and offer specific, specialized work.

2.0.10 Outsourcing, offshoring, and reshoring

Outsourcing

Outsourcing is when business transfer part of its work to outside companies.

This save HR costs and overhead costs, increase specification, reduce training. But take time to sign a contract, may be dangerous, and may have issues in communication.

Offshoring

Offshoring is when companies move their manufacturing facilities to another country. This often cause a loss of jobs. However, offshoring reduce costs.

This is often done due to low wages in foreign countries and lower taxes.

Reshoring

Reshoring occurs by bring back manufacturing facilities from Offshoring.

This happens to support the home country's economy, or for CSG reasons.

Nearshoring

Offshoring, but to a county close to the home country.

2.0.11 Influence of innovation, ethics and culture on work force practices

2.1 Organization Structure

2.1.1 Terminology

Delegation

Delegation is the act of assigning responsibility to a person, in order for them to carry out a task. Normally, one delegates downwards to someone in a lower rank. However, the person who delegates the task is still held responsible of the task.

Span of Control

Span of Control decides the number of employees a manager can directly control. This number varies through different situations. Complex work requiring supervision would have a narrow span of control, while work like mass production have a wide span of control.

Narrow control means more direct supervision. Wider control means more empowerment and delegation. It also means better communication.

Level of Hierarchy

Levels of Hierarchy is the amounts of levels in the company hierarchy. The larger the level of hierarchy, the more narrow the span of control.

Chain of Command

Chain of command defines the line of authority in which responsibility and orders are passed down from one person to another. The longer the chain of command, the more time it would take to communicate up and down the layers of hierarchy.

Bureaucracy

Bureaucracy is a system in which a clear hierarchical structure and chain of command has been set up. Employees are expected to follow the administration precisely.

Centralization and Decentralization

Decentralization means a transfer of decision-making power. In a centralized organization, only a small group of people make all the decisions.

De-layering

The act of remove the numbers of layers in a organization hierarchy.

2.1.2 Types of Organizational Charts

A organization chart illustrates the flow of communication between the members of an organization.

Flat/Horizontal

A flat or horizontal organization chart is one that has a few levels of hierarchy, short chain of command, and wide span of control. In this model, middle management is removed. Employees are given more power to make decisions. This is not a good model for large company with many projects.

Tall/Vertical

A tall or vertical organization structure have many levels of hierarchy, long chain of command, and narrow span of control. In this model, there is more direct supervision, and less delegation.

Hierarchical Organizational Structure

A tall organization structure with many levels of hierarchy. Looks similar to a pyramid.

Organization by Product

The business is organized into different departments focused on different products. The departments are more specialized, but they may be duplication in these departments.

Organization by Function

The business is organized into different roles. For example, Finance, HR, Marketing. This is implemented in a stable environment when it is expected that business strategies does not change often.

Organization by Region

Business is organized by region. Often used in multi-national corporations. This allows for more culturally focused management, but the management is decentralized.

2.1.3 Changes in Organizational Structure

Project Based

A temporary structure which is created to finish a specific project. A project manager can manage employees from many different departments. This allows for flexibility and scheduling, but makes the teams self-sufficient.

Shamrock

In a Shamrock organizational structure, companies keep core workers with a multitude of skills. All other employees should be temporary or out sourced.

This increases efficiency and flexibility, but have legal issues in some environments.

2.2 Leadership and Management

2.2.1 Key Functions

Types of managers differ depending on a corporation and their needs. The most common are:

- Planning
- Coordinating
- Commanding
- Controlling
- Organizing

2.2.2 Management VS Leadership

Management is the act of directing the many resources of a business organization to achieve business objectives. Leadership is the use of strategic thinking and smart thinking to inspire individuals to meet challenges and accomplish goals.

A leader inspires, while a manager controls.

2.2.3 Leadership Styles

Situational

Leadership that changes depending on the situation.

Paternalistic

The leader looks after its employees as if they are family.

Laissez-faire

A hands-off leadership style.

Autocratic

Strong and rule based leadership. Relies on following instructions and orders.

Democratic

Leadership that focus on employees' input.

2.3 Motivation

2.3.1 Motivational Theory

Frederick Winslow Taylor

Break down each task into small components, then scientifically teach the employees. Offer extrinsic incentives in the right place.

This model ensures higher efficiency, but is suited only for simple tasks.

Abraham Maslow

Maslow's pyramid showcase the levels of needs for each individual. Below is the layers of the pyramid in order.

Self-Actualization: Recognition of one's potential. Creative self fulfillment.

Esteem needs: Mastery and achievement in a chosen field.

Love and Belongingness needs: The need to be loved the trusted. To below in a family.

Safety needs: To have stability and safety in the environment.

Physiological needs: To have food, shelter, clothing

Maslow argues that you need to satisfy the basic needs before the complex needs.

Fredrick Herzberg

There are two different needs. Hygiene needs and Motivational needs.

Hygiene need, if not met, causes dissatisfaction with work. Motivational needs, when met, causes satisfaction with work.

John Stacey Adams

An employees should receive equal inputs and outputs. When employees are satisfied when the inputs and the outputs are perceived to be equal.

Daniel H. Pink

Pink focus on Autonomy, Mastery, and Purpose. He believes that this is the modern way to achieve motivation.

2.3.2 Financial Motivation Tools

- Salary
- Wages
- Commission
- Profit-based pay
- Performance-related pay
- Employee share-ownership schemes
- Perks

2.3.3 Non-Financial Motivational Tools

- Job rotation
- Job enlargement
- Job enrichment
- Empowerment
- Opportunity to make a difference
- Teamwork

Chapter 3

Finance and Accounts

3.1 Sources of Finance

3.1.1 The Role of Finance

There are many things companies spend money on. This subsection will list some of the uses of finance.

Capital Expenditure One of the most common source of expenditure is `Capital`. Capital investment is spending money on `fixed assets`, which are assets that are hard to sell. Generally, capital expenditures are used to fund long term goals, such as building facilities or buying machinery. Capital expenditures are often funded by long term sources of finance.

Revenue Expenditure Revenue expenditure is spending money on general operation costs. Expenditures such as wages or rent. Revenue expenditures are often funded by short to medium term sources of finance. When a firm cannot pay its revenue expenditure, they go into a state of insolvency.

3.1.2 Internal Source of Finance

Internal sources of finance refers to money collected internally. Such as the sale of assets, retain profit, or personal funds.

Personal Funds is the money invested by the owners of the business

Retained Profit is profit leftover (after paying the bills) from end of a trading year

Sale of Assets is money gained from selling any assets

3.1.3 External Source of Finance

Opposite to Internal Sources of Finance, External Sources of Finance is money gathered through outside means.

Equity Finance

Equity Finance is money gathered by selling ownership of the company. Equity does not come with any interest, or requirement of repayment. However, selling equity comes with the cost of losing control and dividends.

Share Capital is money raised through selling shares

Business Angel are wealthy investors, often buying a chunk of shares as investment

Venture Capitalist are companies similar to Business Angels

Debt Finance

Debt finance is the method of borrowing money to acquire finance. Often times, borrowing money can quickly bring money for investment, but their is the cost of interest. Interest is additional money owed overtime as borrowed money is payed off.

Loan Capital are long term borrowing of money, often for the purchasing capital. These loans require collateral in case there is a default on the loan.

Overdrafts are a high cost, short term loan. It is when the company spend more money that they have in their account, and have to pay back in high interest.

Credit Cards are a method of borrowing money and paying back every month.

Financial Aid

Financial Aid is money given to the companies for free. Generally, these come from NGOs or governments who want to support the business.

Subsidies money given to the production of goods that is good for the society, often provided by the government

Grants are loans with no interest, and does not need to be paid back. There may be conditions on how the money is spent

Other Sources of Finance

Other then the main sources of finance, there are others that does not fit the groups.

Trade Credit is a method of paying for goods at a later date, without interest. Often provided to companies by companies.

Debt Factoring is the action of selling debt, to a debt factoring company. Often at a lower cost, but with an immediate payment.

Leasing is the action of leasing fixed assets instead of buying them. Flexible, but cost more in the long run.

3.1.4 Short, Medium, and Long-Term Finance

External sources of finance can be broken into 3 types according to their durations. Internal sources of finance can be fall into any of these categories.

Short-Term

Short-term finance are repaid within 12 months. These are normally used to solve cash flow problems or to pay for revenue expenditure. Short-term finance is often expensive and have high interest.

Below is a list of short term finances:

- Overdraft
- Trade Credit
- Debt Factoring
- Leasing
- Subsidies

Medium-Term

Medium-term finance last longer than 12 months, but less than 5 year. These are normally used for buying fixed assets or capital. Medium term finance is in-between of short and long term finance.

Below is a list of medium term finances:

- Loan Capital
- Leasing
- Subsidies

Long-Term

Long term finance last longer than 5 years. Mortgages and all equity finance belong in this category.

Below is a list of long term finance:

- Share Capital
- Venture Capital
- Business Angel

- Loan Capital
- Grants

3.1.5 Evaluation of Sources of Finance

Often times, companies have to make decision on which source of finance to choose. Different methods of finance have different purposes, with different opportunity cost and effectiveness.

There is three general idea for choosing sources of finance, `gearing`, `purpose`, and `ownership`.

Gearing

This will be further explained in 3.6, Efficiency Ratio Analysis.

Gearing ratio calculates the percentage of loan capital versus the total capital of the business. Having a high gearing ratio makes the company risky in case they default on their loans. However, having a high gearing ratio lowers the amount of ownership that needs to be split.

Purpose

Consider the purpose of the funds when gathering finance. Determine if the source of finance falls into short, medium, or long term groups.

Ownership

Different companies have access to different kinds of finance. Sole traders and Partnerships have access to mostly internal sources of finance. They can also take loans and use trade credit. Bigger corporation generally cannot use personal funds, but can take advantage of equity for financing.

3.2 Cost and Revenue

In order for a business to make money, its revenue must be larger than its cost. In this section, we will discuss the different cost and revenue of a company.

3.2.1 Classification of Costs

Cost can be split up into two major categories, Fixed Cost and Variable Costs.

Variable Cost

Variable cost is cost that change directly due to production. These include material and labor used for production.

Fixed Costs

Fixed cost is cost that is not effected directly with production. For example, electricity bills remain relatively constant no matter the amount produced. Although electrify is required to make the product, it is not effected directly by the amount produced.

Other fixed costs include rent, salaries, capital.

3.2.2 Direct and Indirect Costs

Costs can also be clarified into direct and indirect costs. Direct costs are those that directly impact the good and service a company produces. For example, raw material is a direct cost, but coffee machine refills are an indirect cost.

Examples of direct costs are salary or utility, while examples indirect costs are infrastructure cost and advertising.

3.3 Revenue and Revenue Streams

Revenue is the money earned from the selling of goods and services. It is different than profit, in that profit is revenue minus cost. Simply, revenue can be calculated by the selling price of a product times the amount sold.

Revenue streams are methods of generating revenue. Many companies do not earn money from one source. For example, a movie theater do not earn money just from selling tickets, but also food and drinks. Or newspapers that do not earn money just from selling newspapers, but also from advertisements.

3.4 Break-Even Analysis

In order to maintain a health revenue and cost relationships, many companies use break even analysis plan ahead. Break even analysis allows a company to find how much it need to sell in order to `break even` (profit is greater than zero).

3.4.1 Calculating the Break-Even Point

There are several units used in the calculation that have to be noted.

Fixed Cost is cost not effected by change of production

Variable Cost is cost directly effected by change of production

Contribution per Unit is the price per unit minus the variable cost per unit

Break Even Point is the unit of product sold that the total profit is zero

Margin of Safety is the difference between the current unit sold and the break even point

The break even point can be calculated using the following equation:

$$\frac{\text{Fixed Costs}}{\text{Contribution per Unit}} \tag{3.1}$$

3.4.2 Break-Even Charts

Break even chart shows the break even point against unit sold and profit. The x axis is output, or the amount sold. The y axis is revenue and cost.

There are three lines. The first line is the Fixed Cost, which is a parallel line with equation $y = t\texttt{fixed cost}$. The second line is the Total Cost, which starts at the fixed cost, and increase over time. It's equation is $y = \texttt{variable cost per unit} \cdot x + \texttt{fixed cost}$. The last line is the Total Revenue, which starts at zero. It has the equation $y = \texttt{contributions per unit} \cdot x$

The point at which Total Revenue intersects Total cost is the break even point. Draw a line from the Break even point to the x axis. The difference between the break even point and the actual output is the margin of safety.

3.4.3 Evaluation of Break-Even Analysis

Break even analysis is easy to use, and show the important information that keeps the company alive. A company can use break even analysis predict how changes in production can change the profit levels. However, break even analysis is not very accurate. It ignores a companies' inventory and economies of scale. It assumes all products are sold at the same price.

3.5 Final Accounts

In order for business to understand what is going on in their company, they often gather data to create a final account. A final account provides insight into the finance of the company overall. Final accounts are created periodically, often at the end of a business year. However, note that final account only accounts for the business at their current state. What happens in the future is not factored in.

3.5.1 Purpose of Final Account to Stakeholders

Internal stakeholders often look to final accounts for information about the company's health. Management might look at the final account for planning and organizing. While employees might look at a final account to see the financial stability of a company.

External stakeholders look at the final accounts for different reasons. The government may look into the final accounts to make sure the company is following regulations and paying taxes. Competitors may look into the final accounts to compare profits and financial strength.

3.5.2 Ethics in Accounting

3.5.3 Profit and Loss Account

- Sales Revenue
- Cost of Good Sold
- Gross Profit
- Expenses
- Total Expense
- Net Profit before Interest and Tax
- Interest
- Net Profit before Tax
- Tax
- Net Profit After Interest and Tax
- Dividends
- Retained Profit

3.5.4 Balance Sheet

- Fixed Assets
  - Fixed Assets
  - Accumulated Depreciation
  - Net Fixed Assets
- Current Assets
  - Cash
  - Debtors
  - Stock
  - Total Current Assets
- Current Liabilities
  - Overdraft
  - Creditors
  - Short Term Loans
  - Total Current Liabilities
  - Net Current Assets
  - Total Assets less Current Liabilities
- Long Term Liabilities (Debt)
  - Long-Term Loans
  - Mortgage
  - Total Long-Term Liabilities
  - Net Assets
  - Equity

3.5.5 Figures

3.5.6 Intangible Assets

Although we can calculate a value for most assets, some assets have intangible value.

Patents are legal protection that protects an invention for a set number of years.

Copyright are similar to patents, but for artistic works

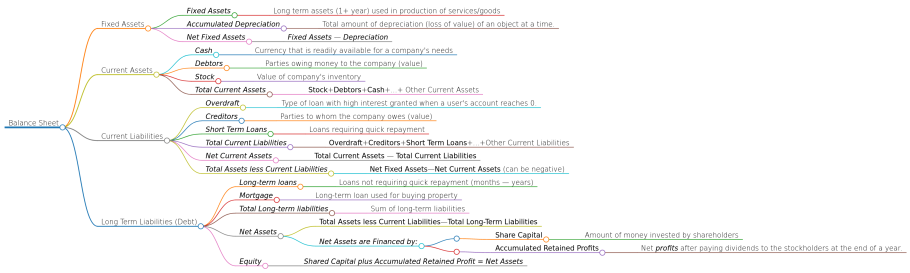

Figure 3.1: Balance Sheet

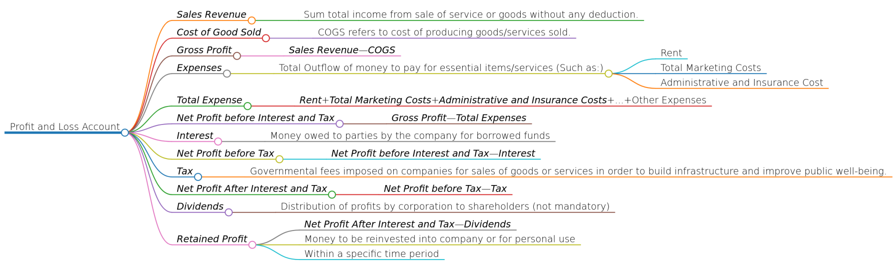

Figure 3.2: Profit and Loss Account

Brand is the brand image of a company

Registered Trademark is a distinctive symbol of the company.

Goodwill is the difference between the purchasing price of a company and its net assets

3.5.7 Depreciation

Over time, fixed assets decrease in value. It is often hard to sell something at the same value as you bought it, especially after a few years.

Causes of Depreciation

Often times, depreciation is caused by wear and tear. Capital such as factories or equipment will get older over time, be prone to breaking. This decrease the value of the fixed asset.

Another cause is obsolescence. This happens when newer technology arrives, and render the current product outdated. In this case, the fixed asset will also decrease in value.

Calculating Depreciation

IB supports two methods of calculations depreciation: The Straight Line method and Reducing Balance method.

The straight line method assumes the asset decrease in value at a fixed rate. Use this equation to calculate the decrease in value per unit of time.

$$\text{Depreciation per unit of time} = \frac{\text{Purchase Price} - \text{Residual Value}}{\text{Estimated useful life}} \tag{3.2}$$

The Reducing Balance method assumes the asset reduce in value by a percent of its value.

The straight line method is easier to calculate, and easy to plan around. However, it is not as accurate as the reducing balance method.

3.6 Profitability and Liquidity Ratio Analysis

3.6.1 Profitability and Efficiency Ratio

Profitably ratios measures how efficient a company can use its resources to make money.

Gross Profit Margin (GPM)

GPM is a measure of how profitable the core business activities are. It is calculate with the following equation:

$$GPM = \frac{\text{Gross Profit}}{\text{Sales Revenue}} \times 100\% \tag{3.3}$$

The higher the ratio, the more the business earn from is revenue. There is no good ratio, as different companies have different ideal ratios. Restaurants, for example, generally have lower GPM ratios while tech based companies have higher GPM ratios.

In order to improve GPM, one can change the price of the product. The higher the price the more the company can earn per product. However, be aware that changing the price can also effect the amount sold. A company can also look to reducing cost.

Net Profit Margin (NPM)

Net Profit Margin shows net profit as a percentage of sales revenue. Similar to GPM, but factor into fixed costs. Calculate NPM with the following equation:

$$NPM = \frac{\text{Net profit before interest and tax}}{\text{Sales revenue}} \times 100\% \tag{3.4}$$

The higher the ratio, the better the company is at managing overhead costs.

You can increase NPM Similar to GPM, but additionally decrease operation costs.

Return On Capital Employed (ROCE)

Return On Capital Employed measures how well a company can make money from capital. Use the following equation to calculate ROCE.

$$ROCE = \frac{\text{Net profit before interest and tax}}{\text{Capital Employed}} \times 100\% \tag{3.5}$$

In which `Capital Employed` can be calculated with the equation below:

$$\text{Capital Employed} = \texttt{Long Term Liabilities} + \texttt{Share Capital} + \texttt{Retained Profits} \tag{3.6}$$

The higher ROCE is, the better the company is at making money from capital. Note that if ROCE is lower than the interest rate of a risk-free saving account, then a company is often not worth investing into.

In order to increase ROCE, a company can increase NPM. They can also reduce long term liabilities.

3.6.2 Liquidity Ratios

Liquidity ratio measures how well can a company sell its assets. They can measure how well can a company pay off short term debts.

Current Ratio

Current ratio measures how much a company own compared to how much they owe. Calculate the current ratio with the equation below:

$$\texttt{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \tag{3.7}$$

The higher the ratio, the healthier the company's total assets. Note, companies want their current ratio to be above 1, as dropping below 1 means they do not have enough assets to pay off their debts. However, if the current ratio is too high, then the company is at risk of wasting the money accumulated. Different types of business have different current ratios. For example, if a company have a steady cash flow, it is not as worried about gathering money to pay debts, and can live with a lower current ratio.

To improve the current ratio, a company can reduce its current liabilities. They can also increase their credit system and sell unused fixed assets. Decreasing overheads and negotiating for longer payment terms can also improve the current ratio.

Acid Test Ratio

Acid Test Ratio measures a more severe indicator of a firm's ability to pay off short term debt, similar to the Current Ratio. Stocks is subtracted from current asset, as it is not as liquid. Use the equation below to calculate the Acid Test Ratio:

$$\texttt{Acid Test Ratio} = \frac{\text{Current Assets} - \text{Stock}}{\text{Current Liabilities}} \tag{3.8}$$

Evaluate this ratio similar to the current ratio.

To improve the acid test ratio, a company can improve the current ratio. They can also increase sales, which can turn stock into current assets.

3.7 Efficiency Ratio Analysis

In this section, we will continue to look at ratios. This section focuses on ratios that improve a company's efficiency.

Stock Turnover Ratio

The Stock Turnover Ratio measures frequent a company have to replenish its stocks. The more frequent, the company is better at converting stocks into sales. Use the equation below the calculate the Stock Turnover Ratio.

$$\texttt{Stock Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}} \tag{3.9}$$

The higher the Stock Turnover Ratio, the better the company is at turning stock into sales. Note, Stock Turnover Ratio does not apply to every company, especially companies that sell services.

Companies can improve this ratio by:

- Lowering price
- Increasing promotions
- Stocking fast selling items
- Buy stocks *just in time*
- Use better sales forecast

Debtor Days

Debtor days measures how well a company can collect its debt. Use the equation below to calculate Debtor Days:

$$\texttt{Debtor Days} = \frac{\text{Debtors}}{\text{Total Sale Revenue}} \times 365 \tag{3.10}$$

Companies can increase Debtor Days by improving credit control.

Creditor Days

Creditor Days measures the number of days a company settle its debts. Similar to Debtor Days, but for the company's debts. Use the equation below to calculate Creditor Days:

$$\texttt{Debtor Days} = \frac{\text{Creditors}}{\text{Cost of Goods Sold}} \times 365 \tag{3.11}$$

Companies can improve creditor days but having a good stock control system, and having good relations with suppliers.

Gearing Ratio

Gearing Ratio measures how much of a company's capital is funded by long term debt. A normal gearing ratio would be between 25% to 50%. The higher the gearing ratio, the less control a company would have over itself. Also, interest and dividend will be higher with a higher gearing ratio.

Calculate the gearing ratio with the equation below:

$$\texttt{Gearing Ratio} = \frac{\text{Loan Capital}}{\text{Capital Employed}} \times 100\% \tag{3.12}$$

To improve the gearing ratio, a company can increase retained profit. They can also pay up long term loans or swap debt for equity.

3.8 Cash flow

Cashflow is what determines if a company will become bankrupt. It measures how much money is going in and out of a company.

3.8.1 Difference Between Cash Flow and Profit

Profit is equal to sales revenue minus total cost. Net cashflow is equal to cash inflow minus cash outflow. Cashflow is directly connected to profit, as you can have negative profit but still maintain a positive cash flow.

Reasons for Poor Cash Flow

- Lengthy credit period or poor credit collection
- Overstocking
- Poor pricing strategy
- High expenses
- Overtrading
- Low sales
- Seasonal demand

3.8.2 Working Capital Cycle

Working capital refers to the funds keeping a business alive. The Working Capital Cycle describes the process that companies employ to get working capital. There is four steps in the cycle:

1. Cash
2. Creditors
3. Inventory
4. Debtors

3.8.3 Cash Flow Forecast

Cash Flow forecast is a method of compiling a prediction of the cash flow of a company in the next few years. We generally use a table to represent this information.

A sample table would look like this:

	January	February	March	April	May
Opening Balance	3000	4000	7000	10500	9000
Cash Inflows					
Cash Sales Revenue	15000	20000	23000	27000	27000
Debtor payments	4000	3000	3000	4000	6000
Other income	0	2000	0	1000	0
Total cash inflows	19000	25000	26000	32000	33000
Cash outflows					
Peanuts	5000	8000	8000	11000	12000
Packaging	1000	1500	1500	2500	4000
Rent	2000	2000	2000	2000	2000
Wages	6000	6000	6000	8000	8000
Suppliers	2500	3000	3500	7000	6000
Utilities	1500	1500	1500	3000	3000
Total cash outflows	18000	22000	22500	33500	35000
Net cash flow	1000	3000	3500	(1500)*	(2000
Closing balance	4000	7000	10500	9000	7000

Note, values in (`brackets`) are negative.

As long as the opening and closing balances remains positive, the company will not be facing a cash crisis. This table help companies see when they will have a good cash flow position and when they may have a negative cash flow. Allowing them to create strategies that suits the current situation.

Cash flow forecasts are important for a company's planning. They are often required when getting a bank loan. Companies can also compare their forecasts to the actual cash flow, which help with future strategies.

Although cash flow is not the same as profit, it is very important to maintain a positive cash flow. As long as a company can maintain a positive cash flow, it does not need to maintain positive profits (in the short term) to stay alive. In fact, some profitable business may go bankrupt because of cash flow issues occurring when buying expensive fixed assets.

3.9 Investment Appraisal

In order to just the value of an investment, we cannot simply look at the cost and the potential returns. There are many other factors at work when deciding if an investment in worth it or not.

3.9.1 Payback Period

Payback period measures the time it takes for an investment to payback on itself. Since most Cash Flow forecasts are not linear, we tend to calculate the payback period by creating a table of net cash flow and cumulative cash flow.

A sample table would look like this:

Year	Cash inflow	Cash outflow	Net cash flow	Cumulative net
0	0	200,000	-200,000	-200,000
1	80,000	20,000	60,000	-140,000
2	140,000	60,000	80,000	-60,000
3	240,000	120,000	120,000	60,000
4	360,000	200,000	160,000	220,000

The investment would be payed back by year 3, as the cumulative cash flow is positive. To be more precise, we can use a formula to find the exact month in which the investment is payed back:

$$\texttt{Payback Period} = \frac{\text{Amount left to pay}}{\text{Net cash flow in that year}} \times 12 \tag{3.13}$$

Payback period is important, because money looses value overtime (depreciation). It can also determine how risky an investment is. The shorter the payback period, the better the investment.

3.9.2 Average Rate of Return

The Average Rate of Return measures the amount of the investment earned back each year. We can compare this with different investments, to show which investment is more profitable. For example, if the ARR of an investment is lower than the interest of a bank, then the investment is not worth it. Generally, investments with higher risks will have higher ARR.

Use the equation below to calculate ARR:

$$\frac{(\text{Total Returns} - \text{Capital Cost})}{\text{Years of Use} \times \text{Capital Cost}} \times 100\% \tag{3.14}$$

We can take the value of Total Returns $-$ Capital Cost from the cash flow table.

3.9.3 Net Present Value

Due to inflation, money devalue overtime. Money accessible now is worth more than money given in the future.

In order to calculate the value of money overtime, we use a discount table.

Year	Discount rate				
	4%	6%	8%	10%	20%
1	0.9615	0.9434	0.9259	0.9091	0.8333
2	0.9246	0.89	0.8573	0.8264	0.6944
3	0.889	0.8396	0.7938	0.7513	0.5787
4	0.8548	0.7921	0.735	0.683	0.4823
5	0.8219	0.7473	0.6806	0.6209	0.4019
6	0.7903	0.705	0.6302	0.5645	0.3349
7	0.7599	0.6651	0.5835	0.5132	0.2791
8	0.7307	0.6271	0.5403	0.4665	0.2326
9	0.7026	0.5919	0.5002	0.4241	0.1938
10	0.6756	0.5584	0.4632	0.3855	0.1615

The discount table is given on the test.

We would apply the discount table our cash flow table like so:

Year	Cash inflow	Cash outflow	Net flo
0	0	200,000	-200,00
1	80,000	20,000	60,000
2	140,000	60,000	80,000
3	240,000	120,000	120,00
4	360,000	200,000	160,00

3.9.4 Evaluation of Investment Appraisal

We can evaluate an investment by using quantitative data from the metrics above. Since numbers themselves don't mean anything, we would compare values of two investments to evaluate.

It is important to remember all forecasts are predictions, and may not be accurate. So its often important to consider the non quantitative data when making a decision.

3.10 Budgets