a) The benefits and limitations of sales forecasting AO3

Sales forecasting is a quantitative technique used to predict a firm's level of sales revenue over a given time period, such as per month, quarter, or year. Businesses are keen to understand the latest and expected market trends in the industry and the underlying reasons for these developments. It is a business management tool that can be used to help all aspects of an organisation's operations, so long as the forecasts are carried out with a high degree of accuracy. For example:

- Sales forecasts enable the human resources department to have more information to support **workforce planning**.
- Sales forecasts provide managers with important data to aid decisions about options for internal and external **growth and evolution**.
- It can improve the firm's operation efficiency by allocating the right amount of resources for production schedules and stock (inventory) control, as these will be based on the expected level of sales.

In general, sales forecasts are based on historical sales figures and trends, market analyses of the trends in the industry, and the state of the economy (based on the stage the economy is at in its trade cycle). They can also be used to identify or predict a degree of **correlation**, which shows the relationship between two sets of numbers or variables, such as sales revenue at different times of the year.

The benefits of sales forecasting (AO3)

The benefits of sales forecasting include:

- Sales forecasting can drive strategic planning in a business. For example, it can use sales forecasts to make more informed decisions about growth and expansion plans.
- It enables organisations to predict, identify, and prepare for likely opportunities and threats, such as cyclical and seasonal variations.
- It helps firms to plan for the future, and to minimise uncertainties (risks) of the future. For example, if the sales forecast for a particular product is extremely pessimistic, the business may decide to withdraw the product before it becomes a drain on resources and finances.
- Sales forecasts help businesses to identify sales trends, which helps to improve its operational efficiency. For example, more people can be hired prior to peak trading seasons, improve its stock control and have better cash flow management. By contrast, optimistic, but realistic, forecasts can help the business to secure external sources of finance.

- Learning from the past can strengthen an organisation. Looking at what has happened in the past can help organisations to predict what is likely to happen in the future, thereby strengthening the organisation and helping it to be more successful.

The limitations of sales forecasting (AO3)

The limitations of sales forecasting include:

- Past data and sales trends are not indicative of the future. Extrapolated results can be inaccurate as they ignore changes in the external business environment.
- Sales forecasts are less accurate the longer the time period under consideration, which raises the question about the usefulness of this quantitative tool.
- Realistic and reliable sales forecasts depend on the ability to collect accurate market research data, but this can be time consuming and expensive to collect.
- Sales forecasting has limited use for some businesses, such product-orientated organizations (which do not rely on market research to sell their products), those in rapidly changing markets (such as the fashion industry) and new businesses (which have no previous sales data to draw upon).
- Qualitative factors that affect sales revenues are largely ignored. Examples of qualitative methods that can influence sales forecasts include consumer panels and focus groups. Qualitative factors also include external factors such as the degree of political, economic, and social stability.
- Changes in the external business environment can cause large inconsistencies and inaccuracies in sales forecasts. For example, an unexpected downturn in the economy, which causes a major recession, will nullify optimistic sales forecasts.
- Similarly, the potential for random variations almost nullifies any effort spent on sales forecasting. Examples of such events include crises (such as a global financial crisis or the outbreak of infectious viruses such as the coronavirus pandemic) and natural disasters (such as earthquakes, extended periods of forest fires, or severe flooding).

Natural disasters, such as severe floods, can make sales forecasting rather pointless

Types of variations

Variations can reduce the validity and accuracy of sales forecasts. The main types of variations are (1) seasonal variations, (2) cyclical variations, and (3) random variations.

1. Seasonal variations

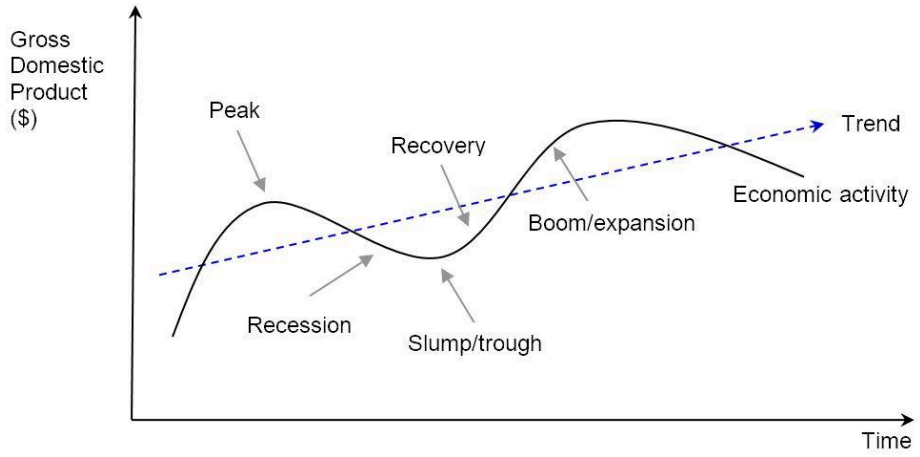
Seasonal variations are foreseeable periodic fluctuations in sales revenues over a known period of time, such as certain months or times of the year. The variations occur on a regular basis, caused by environmental or cultural factors. For example, retailers and travel agencies expect certain peak periods during different times in the year.

Seasonal variations are determined by the numerical difference between the data values and the values on the trend line at each point in time. The seasonal variations can be measured in absolute dollar terms or as percentage of the deviation from the trend. Calculating seasonal variations help organizations to generate a more accurate prediction of sales, such as seasonal fluctuations in demand for:

- IB examiners being recruited for the May and November exam sessions
- Ice cream, beach wear, flip flops, hats and sunglasses during summer months
- Retail sales during the Christmas season
- School bus services during the academic year
- Stationery and school uniforms (including shoes) at the start of the academic year
- Umbrellas during rainy seasons or monsoons
- Vacations during the school holiday season

2. Cyclical variations

Cyclical variations are the recurring fluctuations in sales revenues due to the trade cycle (or business cycle). The main difference between seasonal variations and cyclical variations is the duration of the pattern of variations in sales revenues. Unlike seasonal fluctuations, which are relatively easy to predict throughout the year, cyclical variations last for unpredictable periods of time. For example, Spain took nine years to recover from the 2008 global financial crisis.



The business cycle influences cyclical variations in sales

During an economic boom, the sale of most goods and services increases. For example, with a higher level of national income, businesses will tend to sell more cars, flowers, toys, televisions, holidays. By contrast, during an economic recession, the demand for most goods and services will fall.

To make the sales forecaster more accurate, to account for cyclical variations, marketers adjust the sales figures by the average of the cyclical variations, i.e. the deviation from the trend line.

3. Random variations

Random variations are irregular, erratic or unexpected fluctuations in sales revenues, caused by unexpected and unpredictable factors. As the name suggests, random variations can occur at any time, and for any reason. Examples of such causes include:

- Extreme weather conditions
- Natural disasters
- Outbreak of an infectious disease
- Outbreak of a war

Exam Practice Question - Parx Clothing Co. Ltd. (PCC)

Parx Clothing Co. Ltd. (PCC) is a clothing chain established in 1981. It is vertically integrated, with control of the entire chain of production from designing, manufacturing, and distribution of its clothing products to retail outlets. The company uses the finest quality materials.

PCC has its manufacturing base in Vietnam and has its sales network spread across the USA, India, UK, and Germany. The *PCC* brand is known for being trendy in the fashion industry as well as its international designs. *PCC* has new product launches twice a year. The first takes place in the February/March and second in September/October showcasing *PPC's* latest fashion collections for the season.

The marketing director has created the following **sales forecasts** for the next twelve months, based on the company's past data:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sales ($'000)	200	600	700	300	200	200	250	250	700	800	300	300

(a) Define the term *sales forecasts*. *[2 marks]*

(b) Explain **two** possible economies of scale that *PCC* is likely to have benefited from. *[4 marks]*

(c) Outline **one** advantage and **one** disadvantage of using sales forecasting for *PCC.*