Lecture

INSTITUTE OF ACTUARIAL
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Chapter Name: Introduction to Industry and Company Analysis

Today's Agenda

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1 Introduction

- Industry analysis is the analysis of a specific branch of manufacturing, service, or trade.
- Understanding the industry in which a company operates provides an essential framework for the analysis of the individual company—that is, company analysis.

1.1 Uses of Industry Analysis

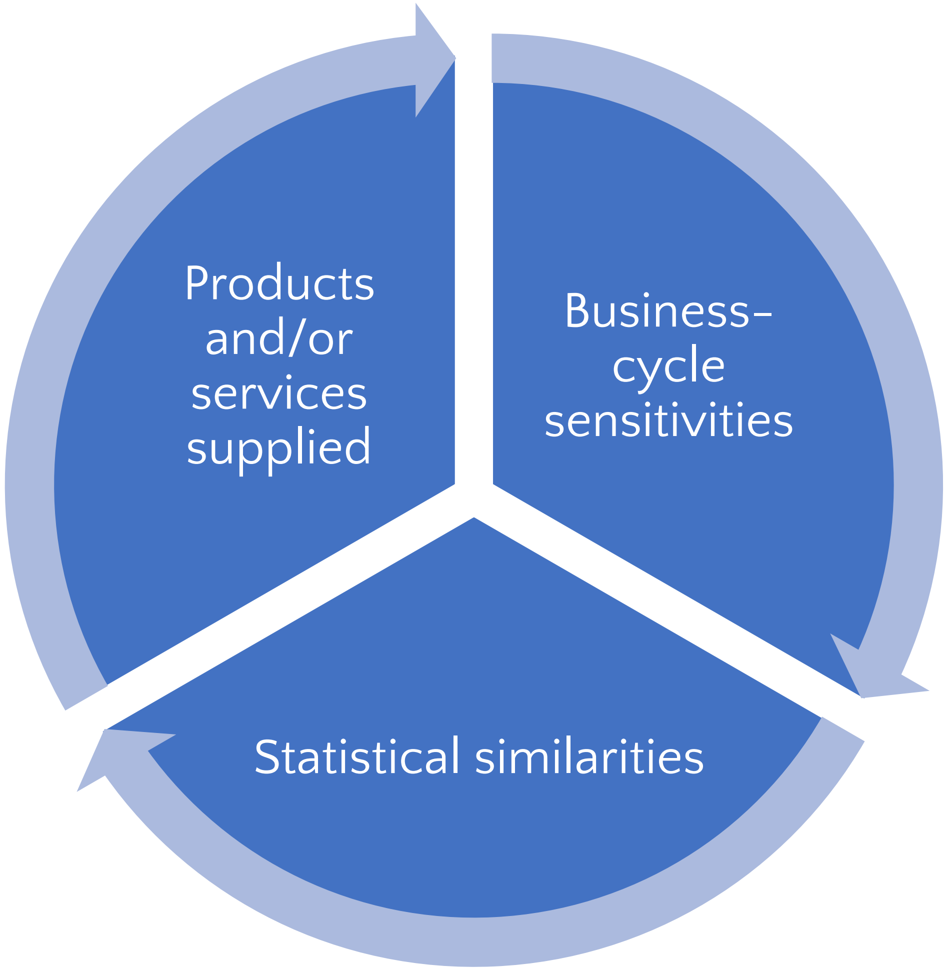
Industry analysis is useful in a number of investment applications that make use of fundamental analysis. Its uses include the following:

1. Understanding a company's business and business environment
Industry analysis is often a critical early step in stock selection and valuation because it provides insights into the issuer's growth opportunities, competitive dynamics, and business risks.

2. Identifying active equity investment opportunities
Investors taking a top- down investing approach use industry analysis to identify industries with positive, neutral, or negative outlooks for profitability and growth. Generally, investors will then overweight, market weight, or underweight those industries (as appropriate to their outlooks) relative to the investor's benchmark if the investor judges that the industry's perceived prospects are not fully incorporated in market prices.

3. Portfolio performance attribution
Performance attribution, which addresses the sources of a portfolio's returns, usually in relation to the portfolio's benchmark, includes industry or sector selection. Industry classification schemes play a role in such performance attribution.

2 Approaches to Identifying Similar Companies



2.1 Products and/or services supplied

- Modern classification schemes are most commonly based on grouping companies by similar products and/or services. According to this perspective, an industry is defined as a group of companies offering similar products and/or services.

- Industry classification schemes typically provide multiple levels of aggregation. The term sector is often used to refer to a group of related industries.

- These classification schemes typically place a company in an industry on the basis of a determination of its principal business activity. A company's principal business activity is the source from which the company derives a majority of its revenues and/or earnings.

- Examples of classification systems based on products and/or services include the commercial classification systems that will be discussed later, namely, the Global Industry Classification Standard (GICS), Russell Global Sectors (RGS), and Industry Classification Benchmark. In addition to grouping companies by product and/or service, some of the major classification systems, including GICS and RGS, group consumer- related companies into cyclical and non- cyclical categories depending on the company's sensitivity to the business cycle. The next section addresses how companies can be categorized on the basis of economic sensitivity.

2.2 Business - Cycle Sensitivities

Companies are sometimes grouped on the basis of their relative sensitivity to the business cycle. This method often results in two broad groupings of companies –

Cyclical company	Non – cyclical company
• A cyclical company is one whose profits are strongly correlated with the strength of the overall economy. • Such companies experience wider- than- average fluctuations in demand—high demand during periods of economic expansion and low demand during periods of economic contraction—and/or are subject to greater- than- average profit variability related to high operating leverage (i.e., high fixed costs). • Examples of cyclical industries are autos, housing, basic materials, industrials, and technology.	• A non- cyclical company is one whose performance is largely independent of the business cycle. • Non- cyclical companies produce goods or services for which demand remains relatively stable throughout the business cycle. • Examples of non – cyclical industries are food and beverage, household and personal care products, health care, and utilities

2.2 Business - Cycle Sensitivities

Although the classification systems we will discuss do not label their categories as cyclical or non- cyclical, certain sectors tend to experience greater economic sensitivity than others. Sectors that tend to exhibit a relatively high degree of economic sensitivity include consumer discretionary, energy, financials, industrials, technology, and materials.

In contrast, sectors that exhibit relatively less economic sensitivity include consumer staples, health care, telecommunications, and utilities.

Limitations:

1. One limitation of the cyclical/non- cyclical classification is that business- cycle sensitivity is a continuous spectrum rather than an “either/or” issue, so placement of companies in one of the two major groups is somewhat arbitrary.
2. Another limitation of a business- cycle classification for global investing is that different countries and regions of the world frequently progress through the various stages of the business cycle at different times.

2.3 Statistical Similarities

- Statistical approaches to grouping companies are typically based on the correlations of past securities' returns.

- This method of aggregation often results in non – intuitive groups of companies, and the composition of the groups may vary significantly by time period and region of the world.

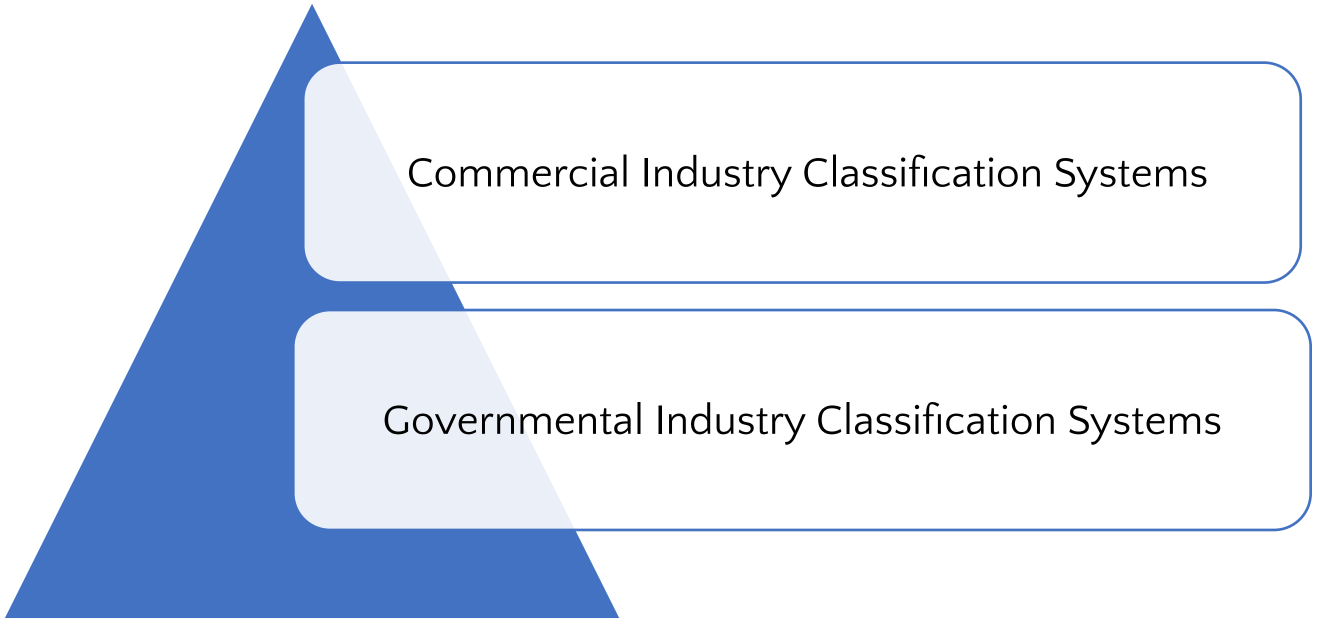
- Moreover, statistical approaches rely on historical data, but analysts have no guarantee that past correlation values will continue in the future.

- In addition, such approaches carry the inherent dangers of all statistical methods, namely,

1. falsely indicating a relationship that arose because of chance or
2. falsely excluding a relationship that actually is significant.

3 Industry Classification Systems

A well - designed classification system often serves as a useful starting point for industry analysis. Classification systems that take a global perspective enable portfolio managers and research analysts to make global comparisons of companies in the same industry.



3.1 Commercial Industry Classification Systems

Major index providers, including Standard & Poor's, MSCI, Russell Investments, Dow Jones, and FTSE, classify companies in their equity indexes into industry groupings.

1. **Global Industry Classification Standard**
   GICS was designed to facilitate global comparisons of industries, and it classifies companies in both developed and developing economies. Each company is assigned to a sub- industry according to its principal business activity. Each sub- industry belongs to a particular industry; each industry belongs to an industry group; and each group belongs to a sector.

2. **Russell Global Sectors**
   The RGS classification system uses a three- tier structure to classify companies globally on the basis of the products or services a company produces.

3. **Industry Classification Benchmark**
   The Industry Classification Benchmark (ICB), which was jointly developed by Dow Jones and FTSE, uses a four- tier structure to categorize companies globally on the basis of the source from which a company derives the majority of its revenue

3.1.1 Representative Sectors

1. Basic Materials and Processing – companies engaged in the production of building materials, chemicals, paper and forest products, containers and packaging, and metal, mineral, and mining companies.

2. Consumer Discretionary – companies that derive a majority of revenue from the sale of consumer– related products or services for which demand tends to exhibit a relatively high degree of economic sensitivity.

3. Consumer Staples – consumer– related companies whose business tends to exhibit less economic sensitivity than other companies.

4. Energy – companies whose primary line of business involves the exploration, production, or refining of natural resources used to produce energy.

5. Financial Services – companies whose primary line of business involves banking, finance, insurance, real estate, asset management, and/or brokerage services.

6. Health Care – manufacturers of pharmaceutical and biotech products, medical devices, health care equipment, and medical supplies and providers of health care services.

3.1.1 Representative Sectors

7. Industrial/Producer Durables – manufacturers of capital goods and providers of commercial services.

8. Real Estate – companies engaged in development and operation of real estate.

9. Technology – companies involved in the manufacture or sale of computers, software, semiconductors, and communications equipment.

10. Telecommunications – companies that provide fixed- line and wireless communication services.

11. Utilities – electric, gas, and water utilities; telecommunication companies are sometimes included in this category.

1.2 Question

The following table defines 11 representative sectors. Suppose the classification system is based on the criterion of a company's principal business activity as judged primarily by source of revenue.

Sector
Basic Materials and Processing
Consumer Discretionary
Consumer Staples
Energy
Financial Services
Health Care
Industrial/Producer Durables
Real Estate
Technology
Telecommunications
Utilities

1.2 Question

Based on the information given, determine an appropriate industry membership for each of the following hypothetical companies:

0. An operator of shopping malls
1. A natural gas transporter and marketer
2. A manufacturer of heavy construction equipment
3. A provider of regional telephone services
4. A semiconductor company
5. A manufacturer of medical devices
6. A chain of supermarkets
7. A manufacturer of chemicals and plastics
8. A manufacturer of automobiles
9. An investment management company
10. A manufacturer of luxury leather goods
11. A regulated supplier of electricity
12. A provider of wireless broadband services
13. A manufacturer of soaps and detergents
14. A software development company
15. An insurer
16. A regulated provider of water/wastewater services
17. A petroleum (oil) service company
18. A manufacturer of pharmaceuticals
19. A provider of rail transportation services
20. A metals mining company
21. A developer of residential housing

Solution

Sector	Company Number
Basic Materials and Processing	7, 20
Consumer Discretionary	8, 10
Consumer Staples	6, 13
Energy	1, 17
Financial Services	9, 15
Health Care	5, 18
Industrial/Producer Durables	2, 19
Real Estate	0, 21
Technology	4, 14
Telecommunications	3, 12
Utilities	11, 16

3.2 Governmental Industry Classification Systems

A number of classification systems in use by various governmental agencies today organize statistical data according to type of industrial or economic activity.

1. **International Standard Industrial Classification of All Economic Activities**
   ISIC classifies entities into various categories on the basis of the principal type of economic activity the entity performs

2. **Statistical Classification of Economic Activities in the European Community**
   It is the classification of economic activities that correspond to ISIC at the European level. Similar to ISIC, NACE classification is organized according to economic activity.

3. **Australian and New Zealand Standard Industrial Classification**
   It was jointly developed by the Australian Bureau of Statistics and Statistics New Zealand in 1993 to facilitate the comparison of industry statistics of the two countries and comparisons with the rest of the world.

4. **North American Industry Classification System**
   NAICS distinguishes between establishments and enterprises. NAICS classifies establishments into industries according to the primary business activity of the establishment.

3.3 Strengths and Weaknesses of Current Systems

Strengths

1. Most government and commercial classification systems are reviewed and, if necessary, updated from time to time

Weaknesses

1. Unlike commercial classification systems, most government systems do not disclose information about a specific business or company, so an analyst cannot know all of the constituents of a particular category

2. Government classification systems generally do not distinguish between small and large businesses, between for- profit and not- for- profit organizations, or between public and private companies.

3. Another limitation of current systems is that the narrowest classification unit assigned to a company generally cannot be assumed to be its peer group for the purposes of detailed fundamental comparisons or valuation

4 Describing and Analyzing an industry

- In their work, analysts study statistical relationships between industry trends and a range of economic and business variables. Analysts use economic, industry, and business publications and internet resources as sources of information.

- Analysts attempt to develop practical, reliable industry forecasts by using various approaches to forecasting. They often estimate a range of projections for a variable reflecting various possible scenarios. Analysts may seek to compare their projections with the projections of other analysts, partly to study differences in methodology and conclusions but also to identify differences between their forecasts and consensus forecasts.

- Investment managers and analysts also examine industry performance 1) in relation to other industries to identify industries with superior/inferior returns and 2) over time to determine the degree of consistency, stability, and risk in the returns in the industry over time.

- analysts examine strategic groups (groups sharing distinct business models or catering to specific market segments in an industry) almost as separate industries within industries.

- Analysts often consider and classify industries according to industry life- cycle stage.

4.1 Principles of Strategic Analysis

- When analyzing an industry, the analyst must recognize that the economic fundamentals can vary markedly among industries. Some industries are highly competitive, with most players struggling to earn adequate returns on capital, whereas other industries have attractive characteristics that allow almost all industry participants to generate healthy profits.

- Differing competitive environments are often tied to the structural attributes of an industry, which is one reason industry analysis is a vital complement to company analysis.

- Analysis of the competitive environment with an emphasis on the implications of the environment for corporate strategy is known as strategic analysis. Michael Porter's "five forces" framework is the classic starting point for strategic analysis.

- Porter (2008) identified the following five determinants of the intensity of competition in an industry:

1. The threat of entry
2. The power of suppliers
3. The power of buyers
4. The threat of substitutes
5. The rivalry among existing competitors

4.1 Principles of Strategic Analysis

1. **Barriers to Entry**

- When a company is earning economic profits, the chances that it will be able to sustain them through time are greater, all else being equal, if the industry has high barriers to entry.

- If new competitors can easily enter the industry, the industry is likely to be highly competitive because high returns on invested capital will quickly be competed away by new entrants eager to grab their share of economic profits.

- If incumbents are protected by barriers to entry, the threat of new entrants is lower, and incumbents may enjoy greater pricing power, because potential competitors would find it difficult to enter the industry and undercut incumbents' prices.

- One way of understanding barriers to entry is

1. by thinking about what it would take for new players to compete in an industry.
2. to investigate the issue is by looking at historical data

- A final consideration when analyzing barriers to entry is that they can change over time.

4.1 Principles of Strategic Analysis

2. Industry Concentration

Much like industries with barriers to entry, industries that are concentrated among a relatively small number of players often experience relatively less price competition.
An analysis of industry concentration should start with market share: What percentage of the market does each of the largest players have, and how large are those shares relative to each other and relative to the remainder of the market?

Fragmented industries tend to be highly price competitive for several reasons.

1. the large number of companies makes coordination difficult
2. each player has such a small piece of the market that even a small gain in market share can make a meaningful difference to its fortunes
3. the large number of players encourages industry members to think of themselves individualistically rather than as members of a larger group,

In concentrated industries, in contrast, each player can relatively easily keep track of what its competitors are doing, which makes tacit coordination much more feasible.
Industry concentration is a good indicator that an industry has pricing power and rational competition.

4.1 Principles of Strategic Analysis

3. Industry Capacity

Industry capacity is the maximum amount of a good or service that can be supplied in a given time period.

1. Tight, or limited, capacity gives participants more pricing power as demand for the product or service exceeds supply,
2. Overcapacity leads to price cutting and a very competitive environment as excess supply chases demand.

Capacity is fixed in the short term and variable in the long term because capacity can be increased if time is sufficient.

4.1 Principles of Strategic Analysis

4. Market Share Stability

Examining the stability of industry market shares over time is similar to thinking about barriers to entry and the frequency with which new players enter an industry. In fact, barriers to entry and the frequency of new product introductions, together with such factors as product differentiation—all affect market shares.

Stable market shares typically indicate less competitive industries; unstable market shares often indicate highly competitive industries that have limited pricing power.

4.1 Principles of Strategic Analysis

5. Industry Life Cycle

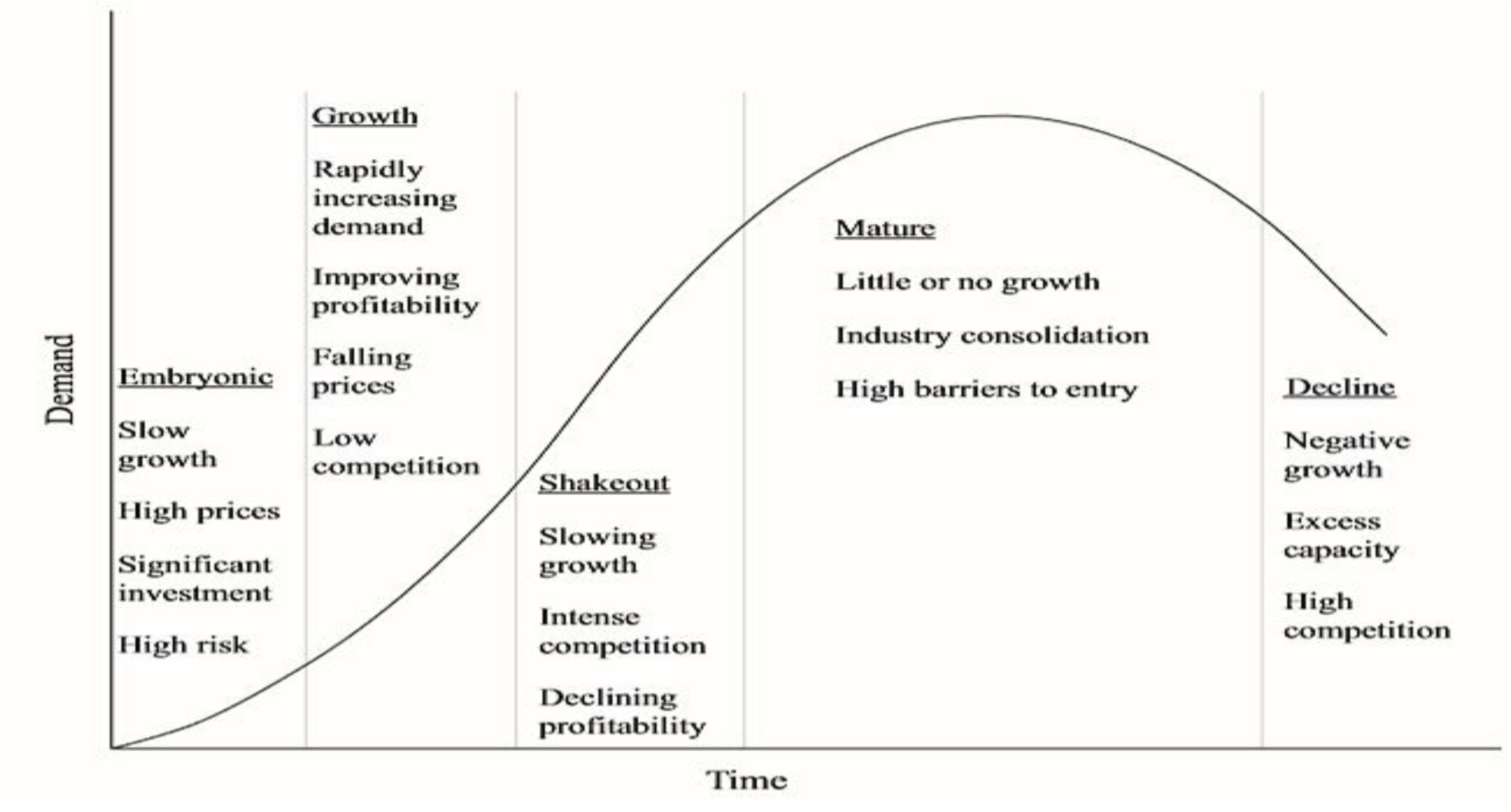
A useful framework for analyzing the evolution of an industry is an industry life- cycle model, which identifies the sequential stages that an industry typically goes through.

embryonic, → growth, → shakeout, → mature, → decline.

The five stages of an Industry life cycle model

4.1 Principles of Strategic Analysis

An Industry Life- Cycle Model



4.1 Principles of Strategic Analysis

Using an Industry Life- Cycle Model

In general, new industries tend to be more competitive (with lots of players entering and exiting) than mature industries, which often have stable competitive environments and players that are more interested in protecting what they have than in gaining lots of market share.

An important point for the analyst to think about is whether a company is “acting its age” relative to where its industry sits in the life cycle.

- Companies in growth industries should be building customer loyalty as they introduce consumers to new products or services, building scale, and reinvesting heavily in their operations to capitalize on increasing demand.
- Long- established companies sometimes find a way to accelerate growth through innovation or by expansion into new markets.
- Companies in mature industries are likely to be pursuing replacement demand rather than new buyers and are probably focused on extending successful product lines rather than introducing revolutionary new products.

4.1 Principles of Strategic Analysis

Limitations of Industry Life– Cycle Analysis

- the evolution of an industry does not always follow a predictable pattern.
- less practical when the industry may be experiencing rapid change because of external or other special circumstances.
- not all companies in an industry experience similar performances.

4.1 Principles of Strategic Analysis

Price Competition
A highly useful tool for analyzing an industry is attempting to think like a customer of the industry.
In general, industries for which price is a large factor in customer purchase decisions tend to be more competitive than industries in which customers value other attributes more highly.

4.1 Question

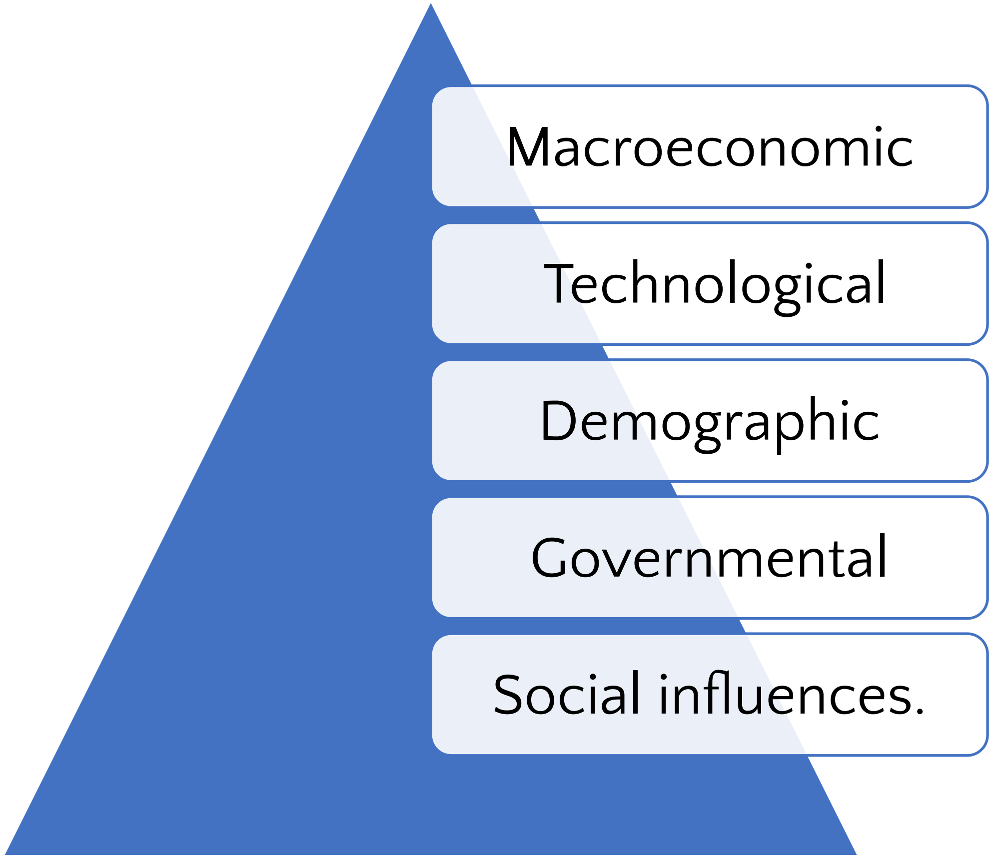
1. An industry experiencing slow growth and high prices is best characterized as being in the:

A mature stage.
B shakeout stage.
C embryonic stage.

Solution

C is correct. Both slow growth and high prices are associated with the embryonic stage. High price is not a characteristic of the mature or shakeout stages.

4.2 External Influences on Industry's growth



4.2 External Influences on Industry's growth

1. **Macroeconomic Influences**
   - Trends in overall economic activity generally have significant effects on the demand for an industry's products or services. These trends can be cyclical (i.e. related to the changes in economic activity caused by the business cycle) or structural (i.e. related to enduring changes in the composition or magnitude of economic activity).

2. **Technological Influences**
   - New technologies create new or improved products that can radically change an industry and can also change how other industries that use the products conduct their operations.

3. **Demographic Influences**
   - Changes in population size, in the distributions of age and gender, and in other demographic characteristics may have significant effects on economic growth and on the amounts and types of goods and services consumed.

4.2 External Influences on Industry's growth

4. **Governmental Influences**
   - Governmental influence on industries' revenues and profits is pervasive and important. In setting tax rates and rules for corporations and individuals, governments affect profits and incomes, which in turn, affect corporate and personal spending. Governments are also major purchasers of goods and services from a range of industries.

5. **Social Influences**
   - Societal changes involving how people work, spend their money, enjoy their leisure time, and conduct other aspects of their lives can have significant effects on the sales of various industries.

5 Company analysis

- Company analysis includes an analysis of the company's financial position, products and/or services, and competitive strategy (its plans for responding to the threats and opportunities presented by the external environment).

- The analyst should seek to determine whether the strategy is primarily defensive or offensive in its nature and how the company intends to implement the strategy.

5 Company analysis

Porter identifies two chief competitive strategies:

low- cost strategy (cost leadership)

- companies strive to become the low- cost producers and to gain market share by offering their products and services at lower prices than their competition while still making a profit margin sufficient to generate a superior rate of return based on the higher revenues achieved.
- Low- cost strategies may be pursued defensively to protect market positions and returns or offensively to gain market share and increase returns.
- Companies seeking to follow low- cost strategies must have tight cost controls, efficient operating and reporting systems, and appropriate managerial incentives.

product/service differentiation strategy.

- companies attempt to establish themselves as the suppliers or producers of products and services that are unique either in quality, type, or means of distribution.
- Corporate managers who successfully pursue differentiation strategies tend to have strong market research teams to identify and match customer needs with product development and marketing. Such a strategy puts a premium on employing creative and inventive people.

5 Company analysis

Elements That Should be Covered in a Company Analysis

A thorough company analysis, particularly as presented in a research report, should

- provide an overview of the company (corporate profile), including a basic understanding of its businesses, investment activities, corporate governance, and perceived strengths and weaknesses;
- explain relevant industry characteristics;
- analyze the demand for the company's products and services;
- analyze the supply of products and services, which includes an analysis of costs;
- explain the company's pricing environment;
- present and interpret relevant financial ratios, including comparisons over time and comparisons with competitors.

The financial statements of a company over time provide numerous insights into the effects of industry conditions on its performance and the success or failure of its strategies. They also provide a framework for forecasting the company's operating performance when given the analyst's assumptions for numerous variables in the future.

5 Company analysis

Spreadsheet Modeling

Spreadsheet modeling of financial statements to analyze and forecast revenues, operating and net income, and cash flows has become one of the most widely used tools in company analysis.
modeling requires the analyst to predict and input numerous items in financial statements, there is a risk of errors—either in assumptions made or in formulas in the model—which can compound, leading to erroneous forecasts.