Chapter 9

Economic Efficiency of Production and Business in Enterprise

Learning objectives

- Economic efficiency and the role of improving economic efficiency in the production and business of enterprise.
- Computation approaches of business efficiency indicators in enterprise.
- Solutions improve the economic efficiency of production and business.

1. Economic efficiency and the role of improving economic efficiency in the production and business of enterprise

The Concept of Economic Efficiency in Production and Business

- Economic efficiency of phenomenon (or process) is an economic category that reflects the usage level of resources (human resources, financial resources, material resources, capital) to achieve a defined goal.
- The general formula for economic efficiency is demonstrated as follows:

$$H = K/C \qquad (1)$$

Where

- H is the economic efficiency of some phenomenon (economic process).
- K is the result obtained from that economic phenomenon (process).
- C is the total cost of achieving that result.

The Essence of Economic Efficiency in Production and Business

- The essence of the economic efficiency category of production and business activities is related to two concepts of efficiency and results of production and business activities.
  - ❖ The results of production and business activities of enterprises are what enterprises achieve after a certain production and business process, such as revenue, profit, market share, product quality, etc.
  - ❖ Meanwhile, formula (1) shows that in the concept of production and business efficiency, both indicators are results (output) and costs (input resources) to evaluate production and business efficiency.

How to distinguish effective types

- ***Economic efficiency***
  - ❖ It reflects the utilization level of resources to achieve economic goals (economic growth rate, gross domestic product, national income, etc.).
- ***Social efficiency***
  - ❖ It reflects the utilization level of production resources to achieve certain social goals (solving jobs, improving social welfare, etc.).
- ***Social-economic efficiency***
  - ❖ It reflects the utilization level of social production resources to achieve certain socio-economic goals (economic growth rate, gross domestic product, revenue, immigration, job creation, etc.).

Effective Business - The Survival Condition of Every Enterprise

- ***Business efficiency is a tool of business management***

  - ❖ Business efficiency is one of the tools for managers to perform their management functions.

  - ❖ The review and computation of business performance not only indicate the production level but also allow managers to analyze and find factors with appropriate measures that can increase results and reduce business costs to improve efficiency.

Effective Business - The Survival Condition of Every Enterprise (Cont.)

- ***The necessary to improve business efficiency***
  - ❖ Wealth scarcity (i.e., production means, land, etc.) forces people to think about economic choices.
  - ❖ Scarcity increases leading to the problem of choosing the optimal economy increasingly seriously and strictly.
  - ❖ Enhancing business efficiency means improving the ability to use limited resources in production, achieving optimal choices.
  - ❖ Business activities in the competitive environment and market economy mechanism, enhancing business efficiency of production activities are conditions for the existence and development of enterprises.

2. Computation approaches of business efficiency indicators in enterprise.

The System of Economic Efficiency Indicators of Production and Business Activities

- ***Concepts***
  - ***Production capital***: it consists of land, factories, technical know-how, business initiatives, equipment, materials, goods, etc. They are the value of tangible and intangible assets, fixed assets, liquid assets, and cash used for production.
    - Moreover, production capital is also divided into fixed and working capital.
    - Total production costs include fixed and variable costs.

The System of Economic Efficiency Indicators of Production and Business Activities (Cont.)

- ***Concepts***
  - ***Sales***: it includes money from sales of goods and services.
  - ***Gross profit:*** it is the remainder of sales after deducting variable costs.
  - ***Profit before tax:*** it is equal to gross profit which subtracts fixed costs.
  - ***Profit after tax (net profit):*** it is equal to profit before tax which subtracts taxes.

Indicators of Aggregate Economic Efficiency

1. Profit indicators

a. Profit of the entire operating capital

- This is the most accurate indicator of effectiveness, allowing *comparison of different industries*. The higher the return on the entire operating capital proves the enterprise makes good use of resources.

$$D^{VKD}\ (\%) = (Pr^{R} + TL^{VV}) \times 100/V^{KD}$$

Where:

- D^{VKD} is the profit of the entire operating capital.
- Pr^{R} is net profit.
- TL^{VV} is interest on loan repayment.
- V^{KD} is the total operating capital of the enterprise.

Indicators of Aggregate Economic Efficiency (Cont.)

1. Profit indicators

a. Profit of the entire operating capital - Example

Company X - IT Services Industry

- Pr^R: $300,000.
- TL^{VV}: $50,000.
- V^{KD}: $1,000,000.
  - ***D^{VKD} (%) = 35%.***

Company Y - Construction Industry

- Pr^R: $400,000.
- TL^{VV}: $60,000.
- V^{KD}: $1,000,000.
  - ***D^{VKD} (%) = 46%.***

- Company Y in the Construction Industry has a higher return on the entire operating capital (D^{VKD}) compared to Company X in the IT Services Industry.
- Indicate Company Y, which uses its resources and capital more efficiently to generate profit compared to Company X.

Indicators of Aggregate Economic Efficiency (Cont.)

1. Profit indicators

b. Profit of the own capital

- The return on own capital assesses efficiency on a narrower scale than the profit of the entire operating capital and *it is also* used to *compare enterprises in different industries*. The higher the return on own capital proves the enterprise makes good use of its capital.

$$D^{VTC}\ (\%) = (Pr^{R} / V^{TC}) \times 100$$

Where:

- D^{VTC} is the profit of own capital.
- Pr^{R} is net profit.
- V^{TC} is the total of own capital.

Indicators of Aggregate Economic Efficiency (Cont.)

1. Profit indicators

b. Profit of the own capital - Example

Company A - Tourism Services Industry

- Pr^R: $200,000.
- V^{TC}: $1,000,000.
  - ***D^{VTC} (%) = 20%.***

Company B - Food Manufacturing Industry

- Pr^R: $300,000.
- V^{TC}: $2,000,000.
  - ***D^{VTC} (%) = 15%.***

- Company A in the Tourism Services Industry has a higher return on own capital (D^{VTC}) compared to Company B in the Food Manufacturing Industry
- Company A efficiently utilizes its capital to generate profit compared to Company B. It reflects positively on the management and utilization of its capital in the business environment.

Indicators of Aggregate Economic Efficiency (Cont.)

1. Profit indicators

c. Profit of sales revenue

- The return on sales revenue only *compares the efficiency of enterprises in the same industry*.
- The higher the return on sales revenue proves better; however, we should pay attention to inaccuracies when calculating the net profit level in the short term.

$$D^{TR}(\%) = Pr^{R} \times 100/TR$$

Where:

- D^{TR} is the profit from revenue for a certain period.
- Pr^{R} is net profit.
- TR is the revenue for that period.

Indicators of Aggregate Economic Efficiency (Cont.)

1. Profit indicators

c. Profit of sales revenue - Example

Company M – Technology Consulting Industry

- Pr^R: $150,000.
- TR: $1,000,000.
  - ***D^{TR} (%) = 15%.***

Company N - Technology Consulting Industry

- Pr^R: $200,000.
- TR: $1,500,000.
  - ***D^{TR} (%) = 13.3%.***

- Company A has a higher return on sales revenue (D^{TR}) compared to Company B.
- This suggests that Company A is more efficient in generating profit from its revenue.

Indicators of Aggregate Economic Efficiency (Cont.)

2. Business efficiency indicators based on cost

a. Business efficiency (H) according to business costs

$$H^{CPKD}\ (\%) = TR \times 100 / TC^{KD}$$

Where:

- H^{CPKD} is business efficiency calculated according to business costs.
- TR is revenue during the period.
- TC^{KD} is the business cost of products consumed during the period.

Indicators of Aggregate Economic Efficiency (Cont.)

2. Business efficiency indicators based on cost

a. Business efficiency (H) according to business costs - Example

Company ABC – Food Retail Industry

- TR: $500,000.
- TC^{KD}: $300,000.
  - ***H^{CPKD} (%) = 166.67%.***

- H^{CPKD} is 166.67%, which means for every business cost unit of products consumed during the period; as a result, company ABC generates 1.67 units of revenue during the period.

Indicators of Aggregate Economic Efficiency (Cont.)

2. Business efficiency indicators based on cost

b. Business efficiency (H) according to the potential of a period

$$H^{TN}\ (\%) = TC^{KDtt}\ x\ 100/TC^{KDPĐ}$$

Where:

- H^{TN} is business efficiency calculated according to potential.
- TC^{KDtt} is the actual business expenses incurred during the period.
- $TC^{KDPĐ}$ is a business cost that must be achieved.

Indicators of Aggregate Economic Efficiency (Cont.)

2. Business efficiency indicators based on cost

b. Business efficiency (H) according to the potential of a period - Example

Company XYZ – IT Services Industry

- TC^{KDtt}: $100,000.
- $TC^{KDPĐ}$: $800,000.
  - ***H^{TN} (%) = 125%.***
    - H^{TN} is 125%, which means the actual business expenses during the period are 125% of the target business expenses to be achieved.
    - Therefore, company XYZ has exceeded the target business expenses and needs to adjust its expense plans to ensure business efficiency.

Other Analysis Indicators

No.	Analysis Indicators	Formulas	Examples & Description
1	Gross margin	Gross Margin / Sales	Measures profitability at the gross profit level: the number of dollars of gross margin produced for every $1 of sales. **Example:** A gross margin ratio of 34.4% means that for every $1 of sales, the firm produces 34.4¢ of gross margin.
2	Net margin	Net Profit before Tax / Sales	Measures profitability at the net profit level: the number of dollars of net profit produced for every $1 of sales. **Example:** A net margin ratio of 2.9% means that for every $1 of sales, the firm produces 2.9¢ of net margin.
3	Current	Current Assets / Current Liabilities	Measures solvency: the number of dollars in current assets for every $1 in current liabilities. **Example:** A current ratio of 1.76 means that for every $1 of current liabilities, the firm has $1.76 in current assets with which to pay it.

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Other Analysis Indicators (Cont.)

No.	Analysis Indicators	Formulas	Examples & Description
4	Quick	Gross Margin / Sales	Measures profitability at the gross profit level: the number of dollars of gross margin produced for every $1 of sales. **Example:** A gross margin ratio of 34.4% means that for every $1 of sales, the firm produces 34.4¢ of gross margin.
5	Cash	Net Profit before Tax / Sales	Measures profitability at the net profit level: the number of dollars of net profit produced for every $1 of sales. **Example:** A net margin ratio of 2.9% means that for every $1 of sales, the firm produces 2.9¢ of net margin.
6	Debt-to-worth	Current Assets / Current Liabilities	Measures solvency: the number of dollars in current assets for every $1 in current liabilities. **Example:** A current ratio of 1.76 means that for every $1 of current liabilities, the firm has $1.76 in current assets with which to pay it.

Other Analysis Indicators (Cont.)

No.	Analysis Indicators	Formulas	Examples & Description
7	Sales-to-assets	Sales / Total Assets	Measures the efficiency of total assets in generating sales: the number of dollars in sales produced for every $1 invested in total assets. **Example:** A sales-to-assets ratio of 2.35 means that for every $1 invested in total assets, the firm generates $2.35 in sales.
8	Return on assets	Net Profit before Tax / Total Assets	Measures the efficiency of total assets in generating net profit: the number of dollars in net profit produced for every $1 invested in total assets. **Example:** A return on assets ratio of 7.1% means that for every $1 invested in assets, the firm is generating 7.1¢ in net profit before tax.
9	Return on investment	Net Profit before Tax / Net Worth	Measures the efficiency of net worth in generating net profit: the number of dollars in net profit produced for every $1 invested in net worth. **Example:** A return on investment ratio of 16.1% means that for every $1 invested in net worth, the firm is generating 16.1¢ in net profit before tax.

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Other Analysis Indicators (Cont.)

No.	Analysis Indicators	Formulas	Examples & Description
10	Inventory turnover	Cost of Goods Sold / Inventory	Measures the rate at which inventory is being used on an annual basis. **Example:** An inventory turnover ratio of 9.81 means that the average dollar volume of inventory is used up almost ten times during the fiscal year.
11	Inventory turn-days	360 / Inventory Turnover	Converts the inventory turnover ratio into an average "days inventory on hand" figure. **Example:** An inventory turn-days ratio of 37 means that the firm keeps an average of 37 days of inventory on hand throughout the year.
12	Accounts receivable turnover	Sales / Accounts Receivable	Measures the rate at which accounts receivable are being collected on an annual basis. **Example:** An accounts receivable turnover ratio of 8.00 means that the average dollar volume of accounts receivable is collected eight times during the year.

Other Analysis Indicators (Cont.)

No.	Analysis Indicators	Formulas	Examples & Description
13	Average collection period	360 / Accounts Receivable Turnover	Converts the accounts receivable turnover ratio into the average number of days the firm must wait for its accounts receivable to be paid. **Example:** An average collection period ratio of 45 means that it takes the firm 45 days on average to collect its receivables.
14	Accounts payable turnover	Cost of Goods Sold / Accounts Payable	Measures the rate at which accounts payable are being paid on an annual basis. **Example:** An accounts payable turnover ratio of 12.04 means that the average dollar volume of accounts payable is paid about 12 times during the year.
15	Average payment period	360 / Accounts Payable Turnover	Converts the accounts payable turnover ratio into the average number of days a firm takes to pay its accounts payable. **Example**: An accounts payable turnover ratio of 30 means that it takes the firm 30 days on average to pay its bills.

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3. Solutions improve the economic efficiency of production and business

Strengthen the management of strategic business

- Business strategy must be aligned to the market

  - ❖ Examine and study consumer demands, then make the most of available resources, advantages, and opportunities to create products that meet those needs.

  - ❖ Increase the strength of an enterprise and gain competitive advantage in the market.

  - ❖ Must have a high flexibility.

Strengthen the management of strategic business (Cont.)

- Limit risks to a minimum level.
- Identify key goals, strategic business fields and basic conditions to achieve those.
- Fit two types of strategies, including general business strategy and departmental business strategy.
- Have specific and feasible goals achieving maximum efficiency in production and business.

Choose effective production and business decisions

- For any production and business enterprise, they are interested in the profits achieving from their activities with the goal of maximizing profits.
  - The general rule of profit maximization is that a firm will increase output as long as *marginal revenue (MR)* exceeds *marginal cost (MC)*.
    - Marginal cost (MC) is the additional cost when producing one more unit of product.
    - Marginal revenue (MR) is the additional revenue spent selling one more unit of product.
  - An enterprise achieve maximum profit at the level of output where marginal revenue equals marginal cost (MR = MC). At this point, the output level Q* is achieved ensuring maximum efficiency.

Choose effective production and business decisions (Cont.)

- For any production and business enterprise, they are interested in the profits achieving from their activities with the goal of maximizing profits.
  - ❖ To minimize business costs, in addition, the principle of using inputs is that the marginal revenue generated by any input factor (Marginal Revenue Product - MRP) is equal to the marginal cost of using that input factor (MC), that is MRP = MC.
  - ❖ This principle means that enterprises can also use more input factors when MRP > MC and efficiency will be maximized when MRP = MC.

Determine the Break-Even Point

- To do business in the market mechanism, enterprises pay close attention to the efficiency of labor costs, materials, and capital.
- To produce a specific type of product, enterprises must compute and build the optimal relationship between costs and income.
  - ❖ How many products should be produced and sold at what price to ensure break-even?
  - ❖ How many products should be sold with the high price level to make a profit?
- Break-even point analysis is to establish and analyze the optimal relationship between revenue costs, output and selling price.

Develop qualifications and motivate the workforce

- Human creativity labor is a key factor in business performance.
  - ❖ Enterprises need to invest adequately to develop the scale of retraining and new training of the workforce in enterprises.
  - ❖ Improve business operations and skill levels of scientists, engineers, and technical workers to optimally exploit raw materials, machinery productivity, etc.
- Enterprises must create an optimal labor structure and ensure enough jobs based on reasonable division and arrangement of labor, etc.
- Individual and collective motivation of workers is a crucial factor in economic efficiency.
  - ❖ Ensuring fairness and reasonableness.
  - ❖ Strict rewards and punishments, etc.

Management and production organization

- Organize your enterprise that has a compact, light, and flexible apparatus in response to market changes.
- The organizational structure of an enterprise must adapt to the business environment change.
- Clearly define functions, tasks, powers, responsibilities, and relationships among departments.
- Put the enterprise's operations in order and avoid overlap between the functions and tasks of departments.
- The information system must meet user needs and be set up with all content and issues that enterprises are interested in.

Technological and technical development

- Technological development takes a long time, requires large investments, and requires careful consideration of following three issues.
  - ❖ Technological innovation is derived from correctly predicting market and business demand for the type of developed and invested product.
  - ❖ Choose appropriate technology and have the right solution for mobilizing and using capital for technology investment.
- Shortening construction time to quickly put investment projects into operation.
- Equipment maintenance ensures machinery that always operates an appropriate plan and utilizes right capacity.

Strengthen the expansion of connected relationships between enterprises and society

- Resolve a good relationship with customers and suppliers.
- Create trust and reputation for enterprises in the market based on product quality, business style, service spirit, etc.
- Resolve a good relationship with advertising companies, business leadership agencies, etc.
- Develop contact information with organizations that are different from the market.
- Business operation in accordance with the law.
- Etc.

In conclusion

- Economic efficiency and the role of improving economic efficiency in the production and business of enterprise.
- Computation approaches of business efficiency indicators in enterprise.
- Solutions improve the economic efficiency of production and business.

THANK YOU
FOR YOUR ATTENTION

Q&A