

KONSEP-KONSEP BIAYA DAN LINGKUNGAN EKONOMI

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21 October 2009

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Terminologi Biaya

- Biaya Tetap (Fixed Cost)
- Biaya Variabel (Variable Cost)
- Biaya Inkremental (Incremental Cost)
- Biaya Berulang dan Tidak Berulang
- Biaya langsung, Tidak Langsung dan Overhead.
- Biaya Tunai, Biaya Tunai
- Biaya Hangus
- Biaya Kesempatan
- Biaya Siklus Hidup

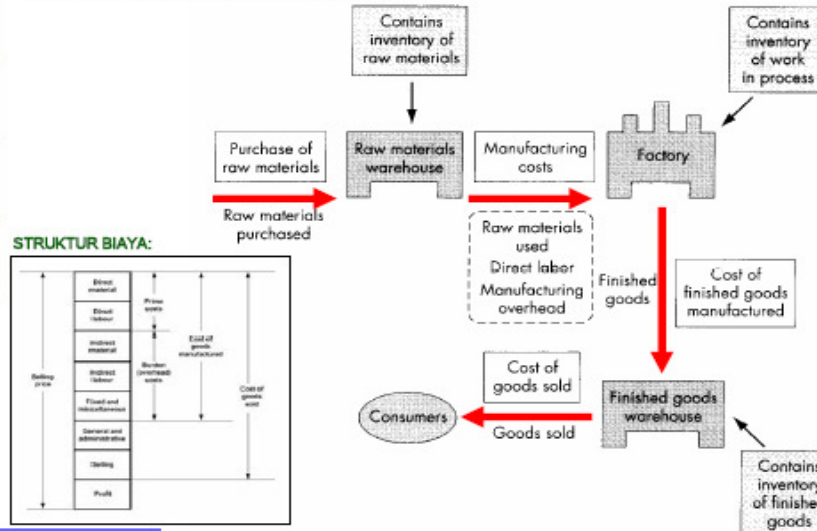
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1. Terminologi Umum Biaya

Jenis-jenis biaya manufaktur:

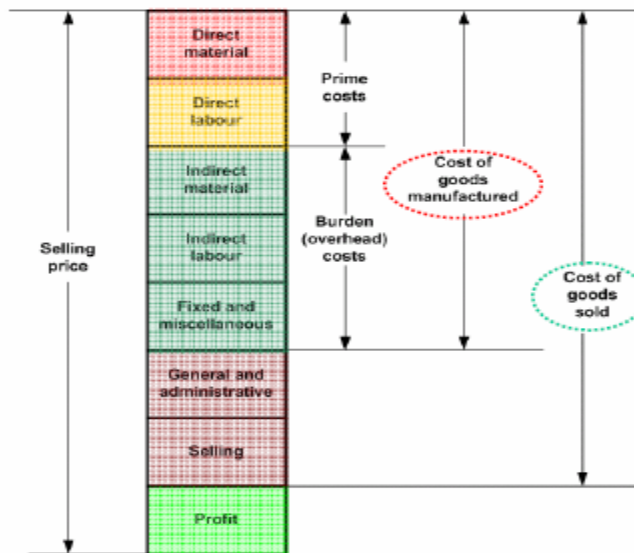


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Jenis-jenis biaya manufaktur:



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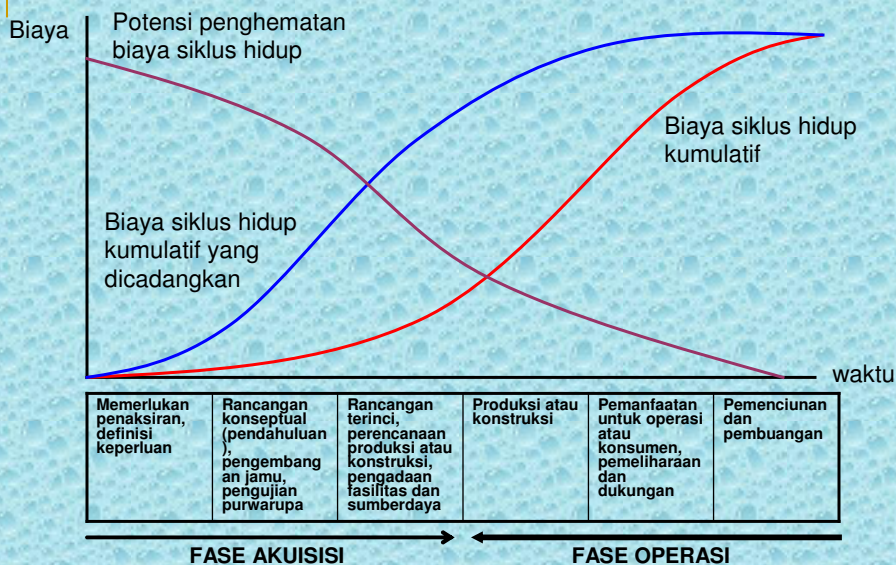
Contoh 1:

Pengerjaan pelapisan jalan, seorang kontraktor memperkirakan biaya \$ 1,15 per yard kubik per mil untuk mengangkut material pelapis aspal dari pabrik pencampuran ke lokasi kerja.

Faktor Biaya	Lokasi A	Lokasi B
Jarak muatan rata-rata	6 mil	4,3 mil
Biaya sewa lokasi tiap bulan	\$ 1.000	\$ 5.000
Biaya memasang dan memindahkan peralatan	\$ 15.000	\$ 25.000
Ongkos angkut	\$1,15/yard ³ mil	\$1,15/yard ³ mil

Bila lokasi B dipilih ada biaya tambahan \$ 96 tiap hari untuk petugas pemberi isyarat. Pekerjaan ini memerlukan 50.000 yard kubik material. Pekerjaan ini memerlukan waktu 4 bulan (17 minggu dari 5 hari kerja per minggu. Jika untuk tiap yard kubik pengangkutan ke lokasi kerja di bayar \$ 8,05

SIKLUS HIDUP DAN BIAYA RELATIF



TEORI PERMINTAAN

- Permintaan
- Jumlah permintaan
- Harga permintaan
- Faktor-faktor yang mempengaruhi permintaan
- Hukum permintaan
- Teori Permintaan
- Fungsi Permintaan
- Permintaan individu
- Permintaan pasar

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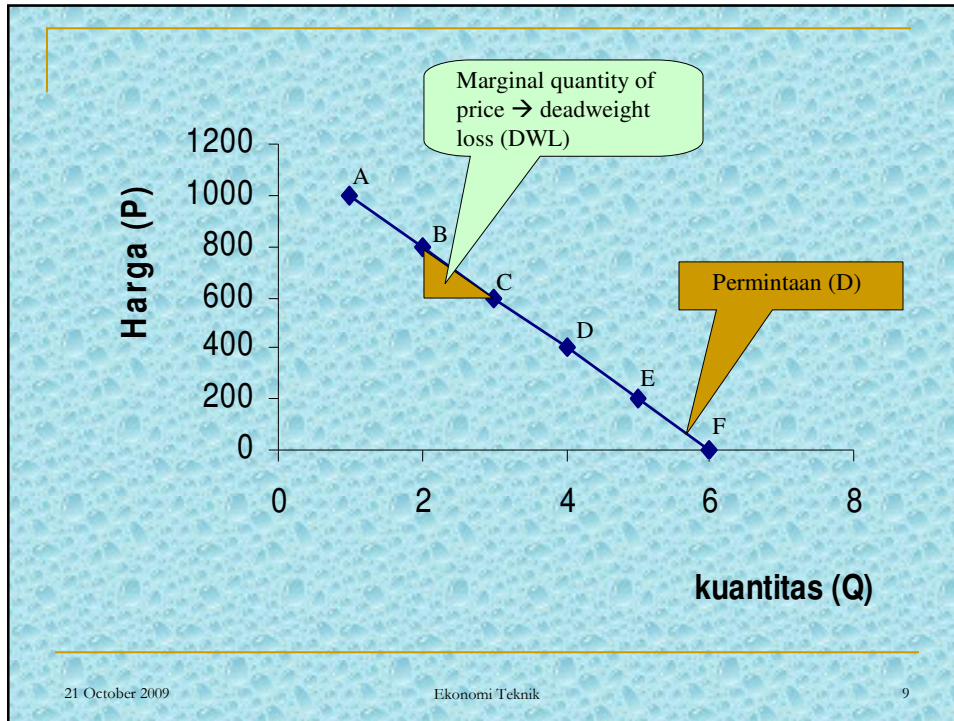
Skedul dan Kurva Permintaan

Harga	Kuantitas yang diminta (Q)	Pendapatan	Titik
1000	100	100.000	A
800	125	100.000	B
600	166.67	100.000	C
400	250	100.000	D
200	500	100.000	E
0	~	100.000	F

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- ## Perkecualian Hukum Permintaan
- **Barang yang memiliki unsur spekulasi.**
 - **Barang prestise**
 - **Barang giffen**
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TEORI PENAWARAN

- Penawaran
- Jumlah penawaran
- Harga penawaran
- Faktor-faktor yang mempengaruhi penawaran
- Hukum penawaran
- Teori Penawaran
- Fungsi Penawaran
- Penawaran individu
- Penawaran pasar

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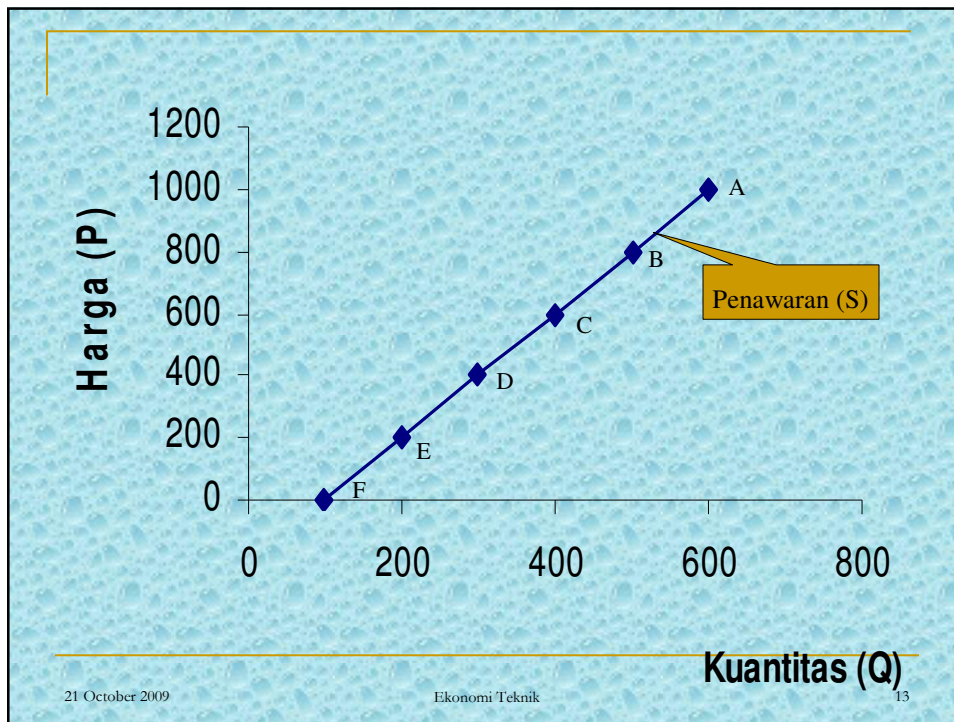
Skedul dan Kurva Penawaran

Harga	Kuantitas yang diminta (Q)	Titik
1000	600	A
800	500	B
600	400	C
400	300	D
200	200	E
0	100	F

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Perkecualian Hukum Penawaran

- Backward bending supply
- Decreasing cost supply
- Constant cost supply
- Biaya yang meningkat dan pendapatan yang menurun
- Penawaran yang tetap (in-elastis sempurna) dan masalah sewa
- Kasus situasi dinamis
 - Osilasi divergen
 - Osilasi abadi
 - Osilasi non linear

Keseimbangan Pasar

- $Q_D = -1,25P + 750$

- $Q_S = 0,5P + 100$

Jawab:

$$Q_D = Q_S$$

$$-1,25P + 750 = 0,5P + 100$$

$$-1,25P - 0,5P = 100 - 750$$

$$-1,75P = -650$$

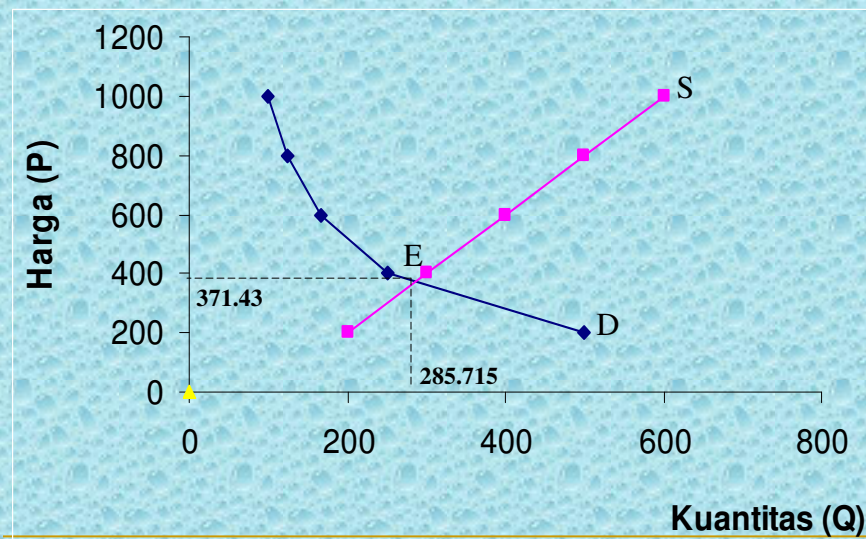
$$P = 371.43 \Rightarrow Q = 285.715$$

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KESEIMBANGAN PASAR



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Kegagalan Pasar

- Informasi tidak sempurna (*incomplete information*)
- Daya monopoli (*monopoli power*)
- Eksternalitas (*externality*)
- Barang public (*public goods*)
- Barang altruisme (*altruism goods*)

The Market Forces of Supply and Demand

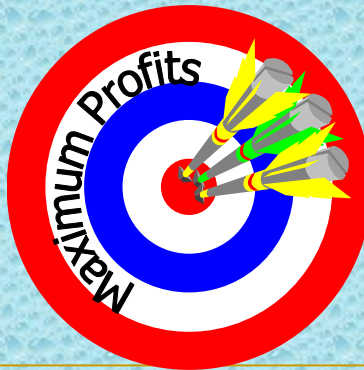
- *Supply* and *demand* are the two words that economists use most often.
- *Supply* and *demand* are the forces that make market economies work.
- Modern microeconomics is about supply, demand, and market equilibrium.

WHAT ARE COSTS?

- According to the Law of Supply:
 - Firms are willing to produce and sell a greater quantity of a good when the price of the good is high.
 - This results in a supply curve that slopes upward.

WHAT ARE COSTS?

- The Firm's Objective
 - The economic goal of the firm is to maximize profits.



Total Revenue, Total Cost, and Profit

- *Total Revenue*
 - The amount a firm receives for the sale of its output.
- *Total Cost*
 - The market value of the inputs a firm uses in production.

Total Revenue, Total Cost, and Profit

- *Profit* is the firm's total revenue minus its total cost.

$$\text{Profit} = \text{Total revenue} - \text{Total cost}$$

Costs as Opportunity Costs

- A firm's *cost of production* includes all the opportunity costs of making its output of goods and services.
- Explicit and Implicit Costs
 - A firm's cost of production include explicit costs and implicit costs.
 - *Explicit* costs are input costs that require a direct outlay of money by the firm.
 - *Implicit* costs are input costs that do not require an outlay of money by the firm.

Economic Profit versus Accounting Profit

- Economists measure a firm's *economic profit* as total revenue minus total cost, including both explicit and implicit costs.
- Accountants measure the *accounting profit* as the firm's total revenue minus only the firm's explicit costs.

Economic Profit versus Accounting Profit

- When total revenue exceeds both explicit and implicit costs, the firm earns economic profit.
 - Economic profit is smaller than accounting profit.

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Figure 1 Economic versus Accountants

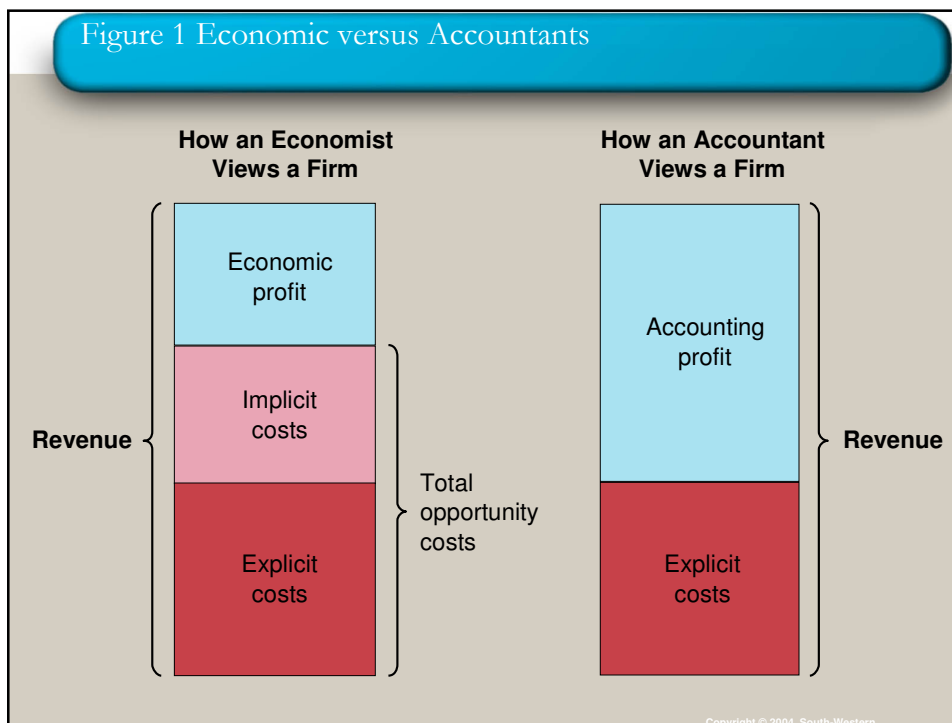


Table 1 A Production Function and Total Cost: Hungry Helen's Cookie Factory

Number of Workers	Output (quantity of cookies produced per hour)	Marginal Product of Labor	Cost of Factory	Cost of Workers	Total Cost of Inputs (cost of factory + cost of workers)
0	0		\$30	\$ 0	\$30
1	50	50	30	10	40
2	90	40	30	20	50
3	120	30	30	30	60
4	140	20	30	40	70
5	150	10	30	50	80

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PRODUCTION AND COSTS

- The Production Function
 - The *production function* shows the relationship between quantity of inputs used to make a good and the quantity of output of that good.

The Production Function

- Marginal Product

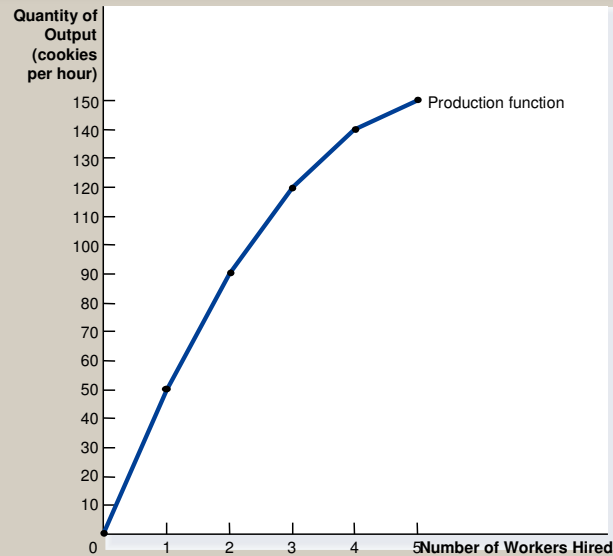
- The *marginal product* of any input in the production process is the increase in output that arises from an additional unit of that input.

The Production Function

- Diminishing Marginal Product

- *Diminishing marginal product* is the property whereby the marginal product of an input declines as the quantity of the input increases.
 - Example: As more and more workers are hired at a firm, each additional worker contributes less and less to production because the firm has a limited amount of equipment.

Figure 2 Hungry Helen's Production Function



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The Production Function

- Diminishing Marginal Product
 - The slope of the production function measures the marginal product of an input, such as a worker.
 - When the marginal product declines, the production function becomes flatter.

From the Production Function to the Total-Cost Curve

- The relationship between the quantity a firm can produce and its costs determines pricing decisions.
- The *total-cost curve* shows this relationship graphically.

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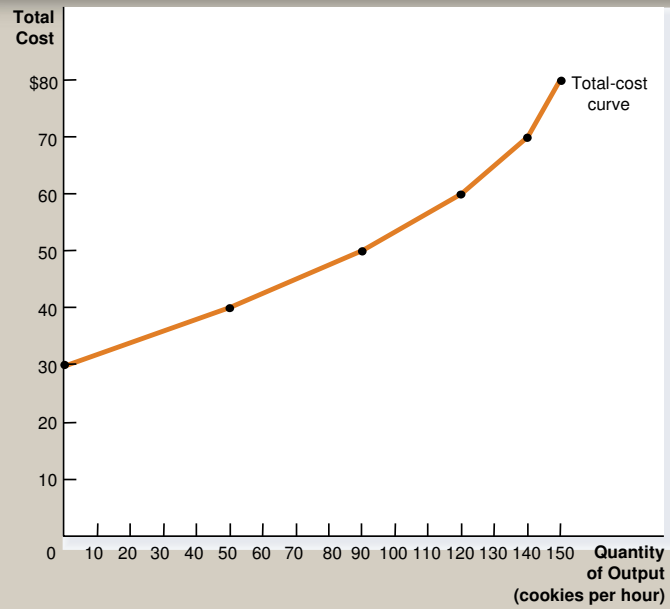
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1	50	50	30	10	40
2	90	40	30	20	50
3	120	30	30	30	60
4	140	20	30	40	70
5	150	10	30	50	80

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Figure 3 Hungry Helen's Total-Cost Curve



THE VARIOUS MEASURES OF COST

- Costs of production may be divided into *fixed costs* and *variable costs*.

Fixed and Variable Costs

- **Fixed costs** are those costs that do not vary with the quantity of output produced.
- **Variable costs** are those costs that do vary with the quantity of output produced.

Fixed and Variable Costs

- **Total Costs**
 - Total Fixed Costs (*TFC*)
 - Total Variable Costs (*TVC*)
 - Total Costs (*TC*)
 - $TC = TFC + TVC$

Table 2 The Various Measures of Cost: Thirsty Thelma's Lemonade Stand

Quantity of Lemonade (glasses per hour)	Total Cost	Fixed Cost	Variable Cost	Average Fixed Cost	Average Variable Cost	Average Total Cost	Marginal Cost
0	\$3.00	\$3.00	\$0.00	—	—	—	
1	3.30	3.00	0.30	\$3.00	\$0.30	\$3.30	\$0.30
2	3.80	3.00	0.80	1.50	0.40	1.90	0.50
3	4.50	3.00	1.50	1.00	0.50	1.50	0.70
4	5.40	3.00	2.40	0.75	0.60	1.35	0.90
5	6.50	3.00	3.50	0.60	0.70	1.30	1.10
6	7.80	3.00	4.80	0.50	0.80	1.30	1.30
7	9.30	3.00	6.30	0.43	0.90	1.33	1.50
8	11.00	3.00	8.00	0.38	1.00	1.38	1.70
9	12.90	3.00	9.90	0.33	1.10	1.43	1.90
10	15.00	3.00	12.00	0.30	1.20	1.50	2.10

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Fixed and Variable Costs

■ Average Costs

- Average costs can be determined by dividing the firm's costs by the quantity of output it produces.
- The average cost is the cost of each typical unit of product.

Fixed and Variable Costs

- Average Costs
 - Average Fixed Costs (*AFC*)
 - Average Variable Costs (*AVC*)
 - Average Total Costs (*ATC*)
 - $ATC = AFC + AVC$

Average Costs

$$AFC = \frac{\text{Fixed cost}}{\text{Quantity}} = \frac{FC}{Q}$$

$$AVC = \frac{\text{Variable cost}}{\text{Quantity}} = \frac{VC}{Q}$$

$$ATC = \frac{\text{Total cost}}{\text{Quantity}} = \frac{TC}{Q}$$

Table 2 The Various Measures of Cost: Thirsty Thelma's Lemonade Stand

Quantity of Lemonade (glasses per hour)	Total Cost	Fixed Cost	Variable Cost	Average Fixed Cost	Average Variable Cost	Average Total Cost	Marginal Cost
0	\$3.00	\$3.00	\$0.00	—	—	—	\$0.30
1	3.30	3.00	0.30	\$3.00	\$0.30	\$3.30	0.50
2	3.80	3.00	0.80	1.50	0.40	1.90	0.70
3	4.50	3.00	1.50	1.00	0.50	1.50	0.90
4	5.40	3.00	2.40	0.75	0.60	1.35	1.10
5	6.50	3.00	3.50	0.60	0.70	1.30	1.30
6	7.80	3.00	4.80	0.50	0.80	1.30	1.50
7	9.30	3.00	6.30	0.43	0.90	1.33	1.70
8	11.00	3.00	8.00	0.38	1.00	1.38	1.90
9	12.90	3.00	9.90	0.33	1.10	1.43	2.10
10	15.00	3.00	12.00	0.30	1.20	1.50	

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Fixed and Variable Costs

- **Marginal Cost**
 - *Marginal cost (MC)* measures the increase in total cost that arises from an extra unit of production.
 - Marginal cost helps answer the following question:
 - How much does it cost to produce an additional unit of output?

Marginal Cost

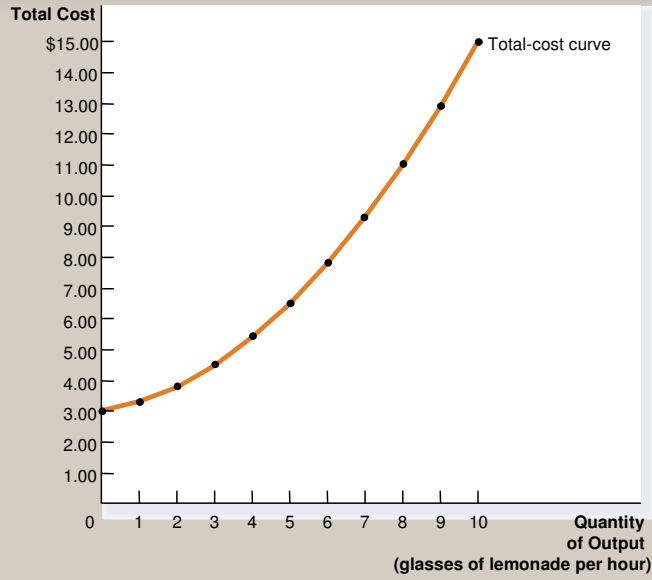
$$MC = \frac{(\text{change in total cost})}{(\text{change in quantity})} = \frac{\Delta TC}{\Delta Q}$$

Marginal Cost

Thirsty Thelma's Lemonade Stand

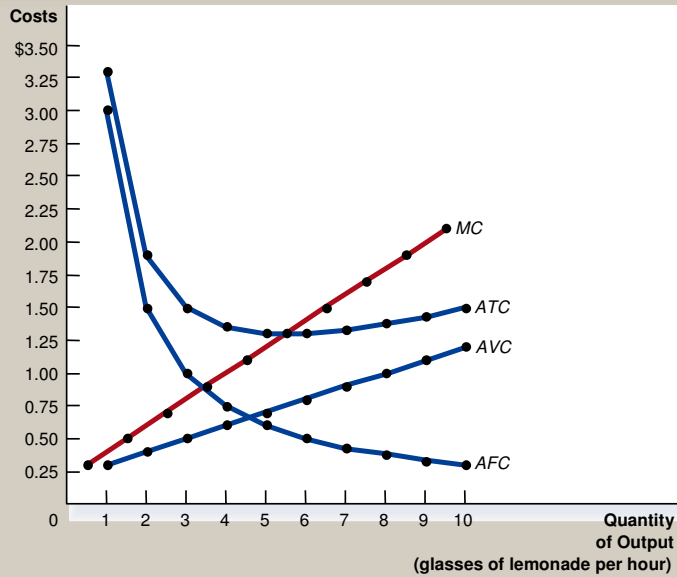
Quantity	Total Cost	Marginal Cost	Quantity	Total Cost	Marginal Cost
0	\$3.00	—			
1	3.30	\$0.30	6	\$7.80	\$1.30
2	3.80	0.50	7	9.30	1.50
3	4.50	0.70	8	11.00	1.70
4	5.40	0.90	9	12.90	1.90
5	6.50	1.10	10	15.00	2.10

Figure 4 Thirsty Thelma's Total-Cost Curves



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Figure 5 Thirsty Thelma's Average-Cost and Marginal-Cost Curves



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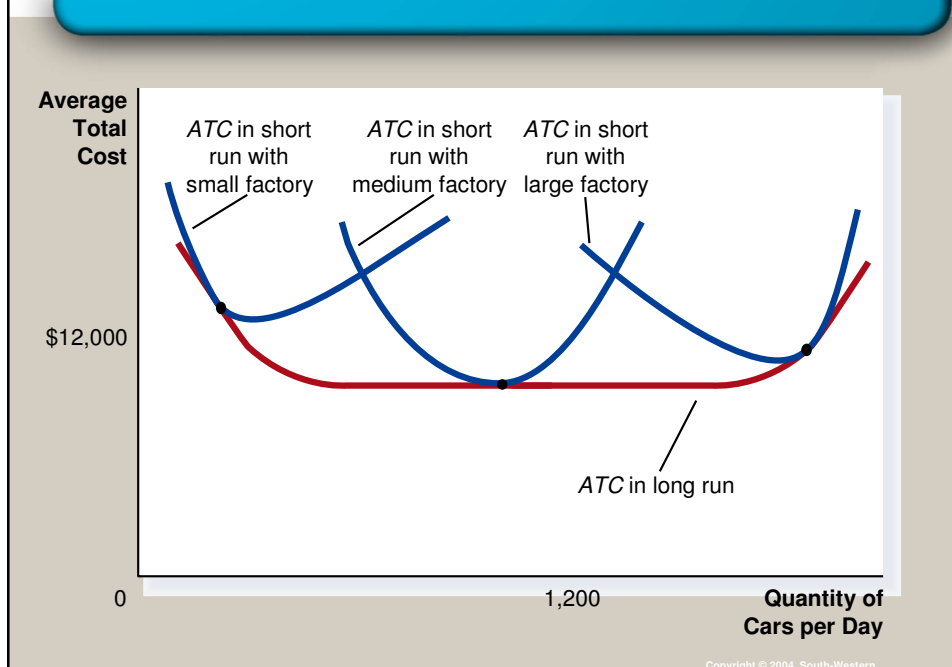
COSTS IN THE SHORT RUN AND IN THE LONG RUN

- For many firms, the division of total costs between fixed and variable costs depends on the time horizon being considered.
 - In the short run, some costs are fixed.
 - In the long run, fixed costs become variable costs.

COSTS IN THE SHORT RUN AND IN THE LONG RUN

- Because many costs are fixed in the short run but variable in the long run, a firm's long-run cost curves differ from its short-run cost curves.

Figure 7 Average Total Cost in the Short and Long Run



Economies and Diseconomies of Scale

- *Economies of scale* refer to the property whereby long-run average total cost falls as the quantity of output increases.
- *Diseconomies of scale* refer to the property whereby long-run average total cost rises as the quantity of output increases.
- *Constant returns to scale* refers to the property whereby long-run average total cost stays the same as the quantity of output increases

Figure 7 Average Total Cost in the Short and Long Run

