

MODUL 9 ANALISA BIAYA UNTUK PENGAMBIL KEPUTUSAN

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Tujuan Pembelajaran

- Identifikasi biaya-biaya dalam pengambilan keputusan
- Analisis
 - Menerima atau menolak pesanan khusus (*Accept a special order*)
 - Membuat atau membeli barang (*Make or buy an item*)

Konsep Biaya dalam Pengambilan Keputusan

*A **relevant cost** is a cost that differs between alternatives.*



Konsep Biaya dalam Pengambilan Keputusan

Relevant Costs

Biaya biaya yang dapat dihilangkan / dihindari (keseluruhan atau sebagian) karena memilih salah satu alternatif

Contoh : Jika ada 2 alternatif : naik Kereta Api atau naik Pesawat terbang, maka tiket KA adalah biaya yang relevan kalau memilih alternatif pesawat terbang. Demikian pula sebaliknya jika memilih alternatif naik KA, maka tiket pesawat terbang adalah biaya yang relevan.

Identifikasi Biaya Yang Relevan Dalam Pengambilan Keputusan (Relevant Cost)

Cynthia, a Boston student, is considering visiting her friend in New York. She can drive or take the train. By car it is 230 miles to her friend's apartment. She is trying to decide which alternative is less expensive and has gathered the following information:

Automobile Costs (based on 10,000 miles driven per year)

	Annual Cost of Fixed Items	Cost per Mile
1 Annual straight-line depreciation on car	\$ 2,800	\$ 0.280
2 Cost of gasoline		0.050
3 Annual cost of auto insurance and license	1,380	0.138
4 Maintenance and repairs		0.065
5 Parking fees at school	360	0.036
6 Total average cost		<u>\$ 0.569</u>

\$45 per month × 8 months

\$1.60 per gallon ÷ 32 MPG

\$18,000 cost – \$4,000 salvage value ÷ 5 years

Identifikasi Biaya Yang Relevan Dalam Pengambilan Keputusan (*Relevant Cost*)

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Some Additional Information

7 Reduction in resale value of car per mile of wear	\$ 0.026
8 Round-trip train fare	\$ 104
9 Benefits of relaxing on train trip	????
10 Cost of putting dog in kennel while gone	\$ 40
11 Benefit of having car in New York	????
12 Hassle of parking car in New York	????
13 Per day cost of parking car in New York	\$ 25

Identifikasi Biaya Yang Relevan Dalam Pengambilan Keputusan (*Relevant Cost*)

Biaya apa saja yang relevan dengan pengambilan keputusan Cynthia ?

Penyusutan mobil adalah *sunk cost* dan tidak relevan dengan keputusan

Biaya tahunan asuransi tidak relevan karena akan tetap sama bila Cynthia membawa mobil atau naik KA.

Tetapi biaya bahan bakar relevan dengan keputusan mengendarai mobil, karena jika ia memilih menggunakan mobil, maka biaya bahan bakar akan terjadi.

Identifikasi Biaya Yang Relevan Dalam Pengambilan Keputusan (*Relevant Cost*)

Biaya apa saja yang relevan dengan pengambilan keputusan Cynthia ?

Biaya pemeliharaan relevan karena dengan bertambahnya jarak tempuh, biaya ini akan bertambah.

Iuran bulanan parkir kampus tidak relevan, karena tetap harus dibayar apapun keputusan yang diambil.

Terlihat beberapa biaya pada rata-rata biaya \$0.569 per mile relevan dan sebagian lagi tidak.

Identifikasi Biaya Yang Relevan Dalam Pengambilan Keputusan (*Relevant Cost*)

Biaya apa saja yang relevan dengan pengambilan keputusan Cynthia ?

Penurunan harga jual mobil karena penambahan jarak tempuh termasuk biaya relevan.

Biaya paket perjalanan KA adalah biaya relevan, karena jika memilih mobil maka biaya ini dapat dihindari.

Biaya penitipan anjing bukan biaya relevan, karena Cynthia tetap akan mengeluarkan biaya ini apapun alternatif yang dipilihnya.

Biaya parkir/hari di New York adalah biaya relevan karena dapat dihindari jika ia memilih alternatif naik Kereta Api.

Identifikasi Biaya Yang Relevan Dalam Pengambilan Keputusan (*Relevant Cost*)

Dari aspek Finansial, Cynthia lebih baik memilih alternatif Kereta Api untuk mengunjungi temannya. Beberapa faktor non-Finansial mungkin saja dapat mempengaruhi keputusan akhir yang diambilnya.

Relevant Financial Cost of Driving	
Gasoline (460 @ \$0.050 per mile)	\$ 23.00
Maintenance (460 @ \$0.065 per mile)	29.90
Reduction in resale (460 @ \$0.026 per mile)	11.96
Parking in New York (2 days @ \$25 per day)	50.00
Total	\$ 114.86

Relevant Financial Cost of Taking the Train	
Round-trip ticket	\$ 104.00

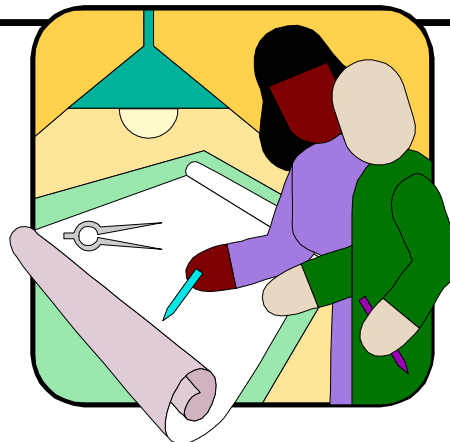
Catatan

- Identifikasi biaya-biaya relevan akan membantu dalam memilih alternatif
- Prinsip biaya relevan akan menghindari kesalahan memilih alternatif
- Sebagian besar biaya tidak berbeda antara alternatif satu dengan lainnya, fokuskan saja pada sebagian lagi biaya yang memang mempengaruhi alternatif

The Make or Buy Decision

A decision concerning whether an item should be produced internally or purchased from an outside supplier is called a “make or buy” decision.

Let's look at the Essex Company example.



The Make or Buy Decision

- Essex manufactures part 4A that is used in one of its products.
- The unit product cost of this part is:

Direct materials	\$ 9
Direct labor	5
Variable overhead	1
Depreciation of special equip.	3
Supervisor's salary	2
General factory overhead	10
Unit product cost	<u>\$ 30</u>

The Make or Buy Decision

- The special equipment used to manufacture part 4A has no resale value.
- The total amount of general factory overhead, which is allocated on the basis of direct labor hours, would be unaffected by this decision.
- The \$30 unit product cost is based on 20,000 parts produced each year.
- An outside supplier has offered to provide the 20,000 parts at a cost of \$25 per part.

Should we accept the supplier's offer?

The Make or Buy Decision

	Cost Per Unit	Cost of 20,000 Units	
		Make	Buy
Outside purchase price	<u>\$ 25</u>		<u>\$ 500,000</u>
Direct materials	\$ 9	180,000	
Direct labor	5	100,000	
Variable overhead	1	20,000	
Depreciation of equip.	3	-	
Supervisor's salary	2	40,000	
General factory overhead	10	-	
Total cost	<u>\$ 30</u>	<u>\$ 340,000</u>	<u>\$ 500,000</u>

$$20,000 \times \$9 \text{ per unit} = \$180,000$$

The Make or Buy Decision

	Cost	Cost of 20,000 Units	
	Per Unit	Make	Buy
Outside purchase price	<u>\$ 25</u>		\$ 500,000
Direct materials	\$ 9	180,000	
Direct labor	5	100,000	
Variable overhead	1	20,000	
Depreciation of equip.	3	-	
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General factory overhead	10	-	
Total cost	<u>\$ 30</u>	<u>\$ 340,000</u>	<u>\$ 500,000</u>

The special equipment has no resale value and is a sunk cost.

The Make or Buy Decision

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		<u>Make</u>	<u>Buy</u>
Outside purchase price	<u>\$ 25</u>		\$ 500,000
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Not avoidable; irrelevant. If the product is dropped, it will be reallocated to other products (fixed cost).

The Make or Buy Decision

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	Per Unit	Make	Buy
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Should we make or buy part 4A?

The Make or Buy Decision

DECISION RULE

In deciding whether to accept the outside supplier's offer, Essex isolated the relevant costs of making the part by **eliminating**:

- The sunk costs.
- The future costs that will not differ between making or buying the parts.

Opportunity Cost

The benefits that are foregone as a result of pursuing some course of action.

Opportunity costs are not actual dollar outlays and are not recorded in the formal accounts of an organization.



Quick Check ✓

Which of the following are **opportunity** costs of attending the university?

- a. Tuition.
- b. Books.
- c. Lost wages.
- d. Not enough time for other interests.

Quick Check ✓

Which of the following are opportunity costs of attending the university?

a. Tuition.

b. Books.

c. Lost wages.

d. Not enough time for other interests.

Opportunity costs do not have to involve money.

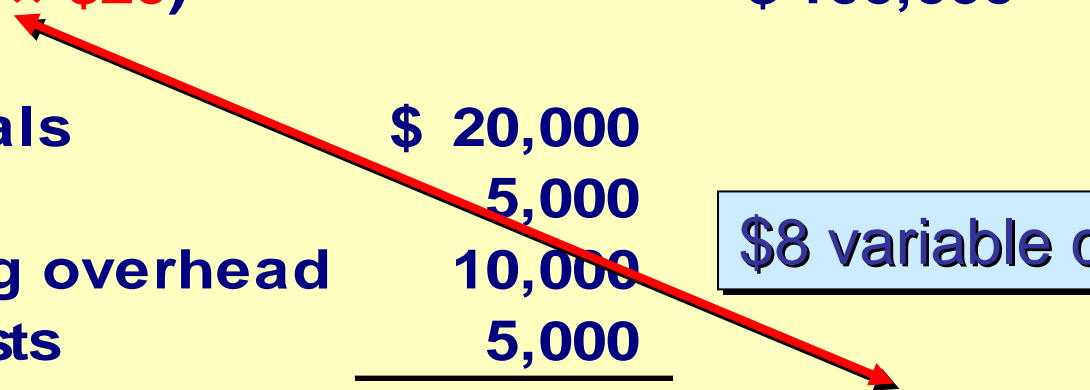
Special Orders

- Jet, Inc. makes a single product whose normal selling price is \$20 per unit.
- A foreign distributor offers to purchase 3,000 units for \$10 per unit.
- This is a one-time order that would not affect the company's regular business.
- Annual capacity is 10,000 units, but Jet, Inc. is currently producing and selling only 5,000 units.

Should Jet accept the offer?

Special Orders

Jet, Inc.		
Contribution Income Statement		
Revenue (5,000 × \$20)		\$ 100,000
Variable costs:		
Direct materials	\$ 20,000	
Direct labor	5,000	
Manufacturing overhead	10,000	
Marketing costs	5,000	
Total variable costs		40,000
Contribution margin		60,000
Fixed costs:		
Manufacturing overhead	\$ 28,000	
Marketing costs	20,000	
Total fixed costs		48,000
Net operating income		\$ 12,000



Special Orders

If Jet accepts the offer, net operating income will increase by \$6,000.

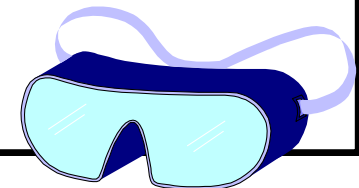
Increase in revenue (3,000 × \$10)	\$30,000
Increase in costs (3,000 × \$8 variable cost)	24,000
Increase in net income	<u>\$ 6,000</u>

Note: This answer assumes that fixed costs are unaffected by the order and that variable marketing costs must be incurred on the special order.

Quick Check ✓

Northern Optical ordinarily sells the X-lens for \$50. The variable production cost is \$10, the fixed production cost is \$18 per unit, and the variable selling cost is \$1. A customer has requested a special order for 10,000 units of the X-lens to be imprinted with the customer's logo. This special order would not involve any selling costs, but Northern Optical would have to purchase an imprinting machine for \$50,000.

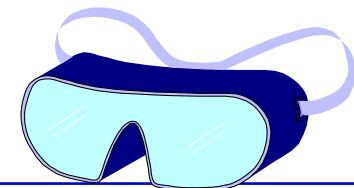
(see the next page)



Quick Check ✓

What is the rock bottom minimum price below which Northern Optical should **not** go in its negotiations with the customer? In other words, below what price would Northern Optical actually be losing money on the sale? There is ample idle capacity to fulfill the order.

- a. \$50
- b. \$10
- c. \$15
- d. \$29



Quick Check ✓

What is the next best pricing option below which No negotiations below what actually ample id

Variable production cost	\$100,000
Additional fixed cost	<u>50,000</u>
Total relevant cost	\$150,000
Number of units	10,000
Average cost per unit	\$15

- a. \$50
- b. \$10
- c. \$15**
- d. \$29

