

Quadrant II - Notes

Course Code: COD132

Module Name: Tax Planning with respect to Make or Buy Decision Practical Problem

Q.1) A company requires 20,000 units of a component every year for next five years. The component can either be manufactured by the company in its factory or be purchased from the market, From the following information suggest to the company whether it should make the component or buy it from the market.

- a) Material cost per unit ₹ 4
- b) Labour cost per unit ₹ 6
- c) Variable overhead cost per unit ₹ 2
- d) If the company manufacturers the part, it has to purchase a machine by taking a loan from the bank. The present value of net cash outflow in this regard in five years will be ₹ 1,00,000.

The component is available in the market at ₹ 12.50 per unit and ₹ 14 per unit

Solution :-

Determination whether the company should manufacture the component or buy it

| Particulars | Units | Cost Per Unit | Amount |
|---------------------------------|-------|---------------|--------|
| Material | 20000 | 4 | 80000 |
| Labour | 20000 | 6 | 120000 |
| Variable Cost | 20000 | 2 | 40000 |
| PV of cash outflow for the year | | | 20000 |

Total Cost for 20000 units

260000

Cost per unit (260000/20000)

13

a) Market Price per unit

12.5

The component should be purchased from the market

b) Market Price per unit

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The component should be Manufactured

Q.2) A company requires a component. From the following information suggest to the company whether it should make the component or buy it from the market:

A) Making the component:

- i) A new machine will be purchased for ₹ 10,00,000. After five years it will be sold for ₹ 2,00,000. If there is any loss on sale of machine, it will be set-off against any other short-term capital gain.
- ii) Rate of depreciation 15%
- iii) Manufacturing cost of component:

| Year | Amount |
|------|-----------|
| I | 14,00,000 |
| II | 16,00,000 |
| III | 18,00,000 |
| IV | 20,00,000 |
| V | 24,00,000 |

- iv) Rate of Tax 30%

B) Buying the component :

| Year | Cost |
|------|-----------|
| I | 20,00,000 |
| II | 22,00,000 |
| III | 24,00,000 |
| IV | 26,00,000 |
| V | 30,00,000 |

Solution: -

**A) Making the component
Computation of Depreciation**

| Year | Cost | Dep (15%) | WDV |
|------|-----------|-----------|----------|
| 1 | 10,00,000 | 1,50,000 | 8,50,000 |
| 2 | 8,50,000 | 1,27,500 | 7,22,500 |
| 3 | 7,22,500 | 1,08,375 | 6,14,125 |
| 4 | 6,14,125 | 92,119 | 5,22,006 |
| 5 | 5,22,006 | 78,301 | 4,43,705 |

$$\begin{aligned}
 \text{Short-term capital loss} &= \text{WDV} - \text{Selling Price} \\
 &= 4,43,705 - 2,00,000 \\
 &= \text{Rs. } 2,43,705
 \end{aligned}$$

Computation of Cost Component

| Year(1) | Manufacturing Cost (2) | Dep (3) | Total Cost (4) | Tax Savings (5) | Net Cost (2-5) |
|---|------------------------|----------|----------------|-----------------|------------------|
| 0 | Nil | Nil | Nil | Nil | 10,00,000 |
| 1 | 14,00,000 | 1,50,000 | 15,50,000 | 4,65,000 | 9,35,000 |
| 2 | 16,00,000 | 1,27,500 | 17,27,500 | 5,18,250 | 10,81,750 |
| 3 | 18,00,000 | 1,08,375 | 19,08,375 | 5,72,513 | 12,27,488 |
| 4 | 20,00,000 | 92,119 | 20,92,119 | 6,27,636 | 13,72,364 |
| 5 | 24,00,000 | 78,301 | 24,78,301 | 7,43,490 | 16,56,510 |
| Total | | | | | 72,73,112 |
| Less: Sale of Machine | | | | | -200000 |
| Gross Cost | | | | | 70,73,112 |
| Less:- Tax savings on Dep (STCL * Tax rate) (2,43,705*30/100) | | | | | -73112 |
| Net Cost to Make the component | | | | | 70,00,000 |

BUYING THE COMPONENT

| Year | Cost of Purchase | Tax Savings @30% | Net Cost |
|---|------------------|------------------|------------------|
| 1 | 20,00,000 | 6,00,000 | 14,00,000 |
| 2 | 22,00,000 | 6,60,000 | 15,40,000 |
| 3 | 24,00,000 | 7,20,000 | 16,80,000 |
| 4 | 26,00,000 | 7,80,000 | 18,20,000 |
| 5 | 30,00,000 | 9,00,000 | 21,00,000 |
| Net Cost of Buying the Component | | | 85,40,000 |

Suggestion: -

In case of Making the component the cost is Rs. 70,00,000 and in case of buying the component the cost is Rs. 85,40,000. Hence, the component should be manufactured.