Nama : Sarla Martiza Maula Putri

NIM : 2021130032

Kelas : MNJ21B

Matkul : Akutansi Manajemen

**Tugas Formatif :**

**Chapter 13**

Wheeler Company wants to buy a numerically controlled (NC) machine to be used in producing specially machined parts for manufacturers of trenching machines. The outlay required is $800,000. The NC equipment will last five years with no expected salvage value. The expected after-tax cash flows associated with the project follow:

Required

1. Compute the payback period for the NC equipment.
2. Compute the NC equipment’s accounting rate of return.
3. Compute the investment’s net present value, assuming a required rate of return of 10 percent.
4. Compute the investment’s internal rate of return.

**Jawaban :**

1. Payback Periode = Original Invesment / Annual Cash in Flow

= $ 800.000 / ($ 1.300.000 - $ 1.000.000)

= $ 800.000 / $ 300.000

= 2,67

Hasilnya adalah 2,67. Oleh karena itu, periode pengembalian modalnya adalah sekitar 2,67 tahun, atau setara dengan 2 tahun dan 8 bulan.

1. Average Depreciation = $ 800.000 / 5 = $ 160.000

ARR = Average Accounting Income / Invesment

= ($ 300.000 - $ 160.000) / $ 800.000

= 17,5 %

Didapatkan hasil 17,5%. Oleh karena itu, berdasarkan perhitungan diatas, nilai ARR-nya adalah sekitar 17,5%.

|  |  |  |  |
| --- | --- | --- | --- |
| YEAR | Cash Flow | Discount Factor | Present Value |
| 0 | $ -800.000 | 1.000 | $ -800.000 |
| 1 | 300.000 | 0.909 | 272.700 |
| 2 | 300.000 | 0.826 | 247.800 |
| 3 | 300.000 | 0.751 | 225.300 |
| 4 | 300.000 | 0.683 | 204.900 |
| 5 |  | 0.621 | 186.300 |
| **NPV** | | | $ 337.000 |

Maka, berdasarkan perhitungan tersebut, nilai Nilai Present Value (NPV)nya adalah sebesar $337.000.

1. RR = *i1* + NPV1 (*i2* – *i*1)

(NPV1 –NPV2)

= 10 + $ 337.000 x (0 – 10)

($ 337.000 – (-$ 800.000))

= 10 + 0,296 x (-10)

= 6,04

Dengan melihat perhitungan tersebut, tingkat pengembalian internal (IRR) dari investasi ini mencapai 6,04%.

**Chapter 12**

Chesbrough, Inc., makes many of the components of its main product in-house. Recently, Berham electronics offered to supply one component,K-25, at a price of $6.50 each. Chesbrough uses 20,000 units of component K-25 each year. The absorption cost per unit of this component is as follows:

|  |  |
| --- | --- |
| Direct materials | $ 2.95 |
| Direct labor | 0.4 |
| Variable overhead | 1.80 |
| Fixed overhead | 4.00 |
| **Total** | **$ 9.15** |

The fixed overhead is an allocated expense; none of it would be eliminated if production of component K-25 stopped.

Required :

1. What are the alternatives facing Chesbrough, Inc., with respect to production of component K-25?
2. List the relevant costs for each alternative. Suppose that Chesbrough, Inc., purchases K-25 from Berham Electronics. By how much will operating income increase or decrease?

**Jawaban :**

1. Dalam kasus perusahaan Chesbrough, Inc., penerapan biaya relevan muncul ketika perusahaan harus memutuskan apakah akan berhenti "membuat atau terus membeli" komponen K-25 dari Berham Electronics. Keputusan ini mempengaruhi biaya tenaga kerja langsung dan memiliki konsekuensi jangka panjang. Dengan memahami biaya relevan, perusahaan dapat membuat keputusan taktis yang sesuai dengan tujuan jangka panjang mereka.
2. Daftar Total Biaya Relevan setiap Alternatif.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Alternatif** | | | **Perbedaan Biaya untuk membuat** |
|  | **Membuat** | **Membeli** | |
| Bahan Baku Langsung | $ 2.95 |  | $ 2.95 | |
| Tenaga Kerja Langsung | 0.40 |  | 0.40 | |
| Overhead Variabel | 1.80 |  | 1.80 | |
| Biaya pembelian | - | $ 6.50 | -6.50 | |
| **Total** | $ 5.15 | $ 6.50 | $ 1.35 | |
|  |

Chesbrough, Inc. sebaiknya membuat sendiri komponen K-25 karena ini dapat mengurangi biaya operasi dan meningkatkan laba operasional sebesar $27.000, menurut perhitungan yang telah dilakukan.