

Level: B.T.S : Commercial Action

Lasted: 04 hours

N.B.: File 1, 2 and 3 are dependent.

You are recruiting as commercial analyst in a company of great distribution has multiple branches, "Dovv-distribution". This structure has supermarkets in the majority of the large cities of the country and markets especially the foodstuffs. Its registered office is in Yaounde.

Mr WANMEGNE, manager of Dovv-distribution, charges you with studying the Files relating to the analysis of profitability, of the sales and the provisioning and inventory control.

FILE 1: Analyze profitability

Dovv- DISTRIBUTION has five (05) supermarkets in the town of Yaounde, Douala and Edéa. Information relating to the activity of these five supermarkets in 2004 is gathered in appendix 1.

Work to be made:

- 1.1) What a supermarket in the traditional design?
- 1.2) Which are the fundamental characteristics of the sales points of the more share of the products distributed in the supermarkets?
- 1.3) Calculate for each of the 5 supermarkets:
 - a) The annual sales turnover per m2 and ray.
 - b) The sales turnover by employee.
 - c) The sales turnover by case.
 - d) The average sales turnover by carriage.
- 1.4) Calculate for supermarket a:
 - a) The sales turnover per m2 and ray.
 - b) The sales turnover by employee for each knowing ray that this supermarket employment 6 cashiers, 5 operations and 01 affected Director with the rays in proportion to their sales turnover (see appendix 2)

FILE 2: Analyze sales

The customers of Dovv-distribution are made up mainly of the retailers who buy at the wholesale price, and of the consumers who buy at the retail price.

Supermarket A based in the shopping centre of Yaounde counts 25 principal retailers with which there exist privileged relationship. The purchases carried out by these retailers in 2005 are contained in appendix 3.

Work to be made:

- 2.1) In your reference with appendix 3, analyze the sales by the method ABC.
- 2.2) Plot the Lorenz curve.
- 2.3) Comment on the results obtained while raising the interest of the method ABC for management of the customers.

FILE 3: Provisioning and inventory control

The problem of inventory control of meat goes with acuity in supermarket A, because of the loss of savour undergone by the meat, when it remains too long time in stock.

This management is entrusted to you to apply the method of the simple batch (method of Wilson).

Knowing that stock at January 1, 2005 is 2500 kg, this meat is sold with supermarket A at a privileged price of 500 FCFA. The ownership cost is 1% of average stock. The procurement lead time is 30 days (see appendix 4 for all the data), and that the cost of making of an order is of 5000 FCFA.

Work to be made:

- 3.1) Calculate for the year the 2005 number of orders and to deduce the economic batch from it.
- 3.2) the company decides to order variable quantities regularly; to draw up the table of management of the provisioning. (One wishes an ending book inventory available to the 30/12/2005 of 2500 kg)
- 3.3) Represent the graph in teeth of saw for the first 6 months of the year.
- 3.4) Made the chart of cumulated consumption, the opening inventory and the cumulated deliveries.

File 4: Optimization of manufacture

An industrial company manufactures parts. The total cost of manufacture according to the number of object X is of:

$$C(x) = 200 + 100x - 0,01x^2$$

Work to be made:

- 1) a- To give the cost of 1000 coins and 1001 coins.
B In deducing the increase from the cost entrained by the manufacture of this part.
- 2) To express according to X, the manufacturing cost $C(x+1) - C(x)$; i.e. increase in the cost corresponding to the manufacture of an additional part. Knowing that one manufactured X parts.

- 3) To calculate $It(x)$ or indicate it derived from the function C.
- 4) In practice, one takes $It(x)$ like value of the marginal cost to row X.
- a) Which is the made error?
- b) To check this result by taking $It(1000)$ with the response found to the (b)

Appendix 1: Information general on five markets in 2004

Supermarket	Annual sales turnover (in 106 FCFA)		Surfaces of sale (in m ²)		Personnel employed	A number of carriages used per annum (in thousands)	A number of cases
	Food rays	Nonfood rays	Food rays	Nonfood rays			
With	34	6	200	80	24	250	6
B	30	10	150	50	15	270	4
C	34	9	200	75	20	240	6
D	40	10	250	75	24	370	7
E	35	8	175	25	16	260	5

Appendix 2: Information on the supermarket

	Butchery	Fruit and vegetables	Dairy	Grocer	Rays nonfood
% of the annual sales turnover	8%	12%	20%	45%	15%
Surface (in m ²)	30	25	25	120	80
Personnel of the ray	5	3	2	1	1

Appendix 3: Sales turnovers realized by the retailers with supermarket A

Retailers	Monthly sales turnover (in FCFA)	Retailers	Monthly sales turnover (in FCFA)
1	60 000 000	14	950 000
2	15 500 000	15	850 000
3	15 500 000	16	700 000
4	5 500 000	17	600 000
5	3 500 000	18	550 000
6	2 500 000	19	500 000
7	2 300 000	20	300 000
8	2 200 000	21	275 000
9	2 000 000	22	225 000
10	1 800 000	23	200 000
11	1 700 000	24	150 000
12	1 600 000	25	100 000
13	1 400 000		

Appendix 4: Forecasts of the sales of meats in 2005 (in kg)

	J	F	M	With	M	J	J	O	S	O	N	D
Consumption	1500	2000	2500	3500	4000	6500	8500	9000	6500	3000	2000	1000
Strategic stock	150	200	250	350	400	650	850	900	650	300	200	100