



MARGINAL COSTING AND SHORT RUN DECISION MAKING

Marginal costing separates fixed and variable costs of production. The nature of marginal costing may be of some use in short run tactical decision making. This type of decision tries to make the best use of existing plant. Because of this the fixed costs connected with a decision may not alter. Due to this the contribution earned from a tactical decision may be of relevance. Thus a project earning the greatest contribution will be accepted.

The following points should be noted carefully with respect to evaluating short run tactical decisions using marginal costing;

- it should be ensured that fixed costs do not change as the result of a decision.
- it may be necessary to split out fixed and variable costs connected with a project.
- it will be necessary to calculate relevant revenues, marginal costs and the contributions made by alternatives.
- if there is a limiting factor eg labour hours, then it will be necessary to calculate contribution per unit of the limiting factor.
- alternatives will be chosen that maximise contribution.

Short run tactical decisions using marginal costing Segment Elimination

If a company decides to delete a product segment, marginal costing principles will aid us in finding whether the profit performance of the firm will suffer.

Example.

Glump has produced the following information, (all figures in £000's);

	Product Line			
	A	B	C	D
Sales	500	300	200	1000
Var. Costs	200	180	120	500
Contribution	<u>300</u>	<u>120</u>	<u>80</u>	<u>500</u>
Fixed Costs;				
Salary	60	40	50	150
Advert & Marketing	12	8	10	30
General Admin	48	32	20	100
Rent + Rates + Light etc	30	25	15	70
Depreciation	<u>20</u>	<u>5</u>	<u>5</u>	<u>30</u>
Total Fixed	<u>170</u>	<u>110</u>	<u>100</u>	<u>380</u>
Net Profit	130	10	(20)	<u>120</u>

The Managing Director gives you some extra information regarding Product C fixed costs:

- all salaries will be eliminated if C is dropped
- all advertising and marketing are directly related to C
- total gen. Admin cost will drop by 5% if C is dropped
- with respect to rent,, etc. there will only be a saving of £5000. The rent is common to the building. The saving is in lighting and heating.

What is your advice to Glump Management? Should any other factors be taken into account.

CONCLUSION

It can be seen from these examples that marginal costing techniques can be used in the solution of the above problems, and is an aid to short run tactical decision making.

LIMITING FACTORS

When plants are operating at times of high demand, or have heavy burdens placed upon them, then quality and output may be restricted by a shortage of components or skilled labour, etc. If this situation is prevailing, then it is important that every time that the scarce factor is used, it must generate the maximum contribution.

Example.

Bags Div. Produces 3,000, 6,000 and 5,000 of three products A, B and C, respectively, per month, for which unit costs, machine hours and selling prices are as follows:

	A	B	C
Machine hours	10	12	14
	£	£	£
Direct materials @ 50p per kg	7	6	5
Direct wages @ £4 per hour	8	6	4
Variable overheads	3	3	3
Fixed overhead	4	3	2
Total cost	22	18	14
Selling price	<u>25</u>	<u>23</u>	<u>18</u>
PROFIT	3	5	4

Sales demand for the period is limited to 4,000 for A, 6000 for B and 6,000 for C. However, as a matter of company policy it is decided to produce a minimum of 1,000 units of Product A. The supply of materials in the period is unlimited, but machine hours are limited to 200,000 hours and direct labour hours to 20,000 hours.

Determine the production levels that should be adopted for the three products in order to maximise profitability and state the maximum profit....

Linear programming can be used to solve resource allocation problems particularly if there is more than one limiting factor.

MAKE OR BUY?

Should a firm contract out or make a component or product in-house?

Example.

Pioneer Ltd, makes four components, A, B, C and D, for which costs in the forthcoming year are expected to be:

	A	B	C	D
Production (units)	1,000	2,000	4,000	3,000
Unit marginal costs	£	£	£	£
Direct materials	4	5	2	4
Direct labour	8	9	4	6
Variable production overheads	2	3	1	2
Fixed costs	£			
Incurred as a direct consequence of making A	1,000			
Incurred as a direct consequence of making B	5,000			
Incurred as a direct consequence of making C	6,000			
Incurred as a direct consequence of making D	8,000			
Other fixed costs (committed)	30,000			

A sub-contractor has offered to supply components A, B, C, and D for £12, £21, £10 and £14 respectively.

Should Pioneer Ltd make or buy the components assuming that it has spare capacity?

SPECIAL SELLING PRICE

Here we are concerned with refusal or acceptance of jobs that use spare capacity, where a lower than normal price is offered by the buyer.

Example

A company produces a certain product, and for the next month production is budgeted at 40,000 units. The costs related to this output are;

	£
Direct Labour	60,000
Direct Materials	40,000
Variable Overhead	40,000

Fixed Overhead

80,000

The company has a full order book for the 40,000 units at a selling price of £6, but at the beginning of the month a client withdraws an order for 4,000 units. In the middle of the month another company offers £4 per unit.

Should the company accept this offer?

REPLACEMENT OF EQUIPMENT

Another decision a company may have to make is whether or not to replace an existing working machine by a superior one. To simplify the calculations we will not discount the cash flow ie we will assume that £1 now will be worth £1 in one year's time.

Example

A company has the opportunity to buy a new machine for £18,000 for which the expected variable operating costs will be 25p per unit. It has an expected life of five years after which it will have no scrap value.

The existing machine was bought three years ago for £12,000 and has expected further life of five years after which it will have no scrap value. Its present book value is £7,000 but its current saleable value is £5,000. The variable operating costs at present are 35p per unit.

Whichever machine is used in future it will operate at a maximum capacity of 30,000 units per year.

Would you advise the company's management to purchase the new machine?