Break Even Analysis

Break Even Analysis is a useful way to look at the relationships between costs, income and profits. It is particularly important for service companies (like training consultancies) where costs are largely fixed. This paper explores how Break Even is calculated and the implications. The examples are based on the Training Challenge simulation.

Income for a training consultancy is the average fee earned per day multiplied by the number of days worked (running courses and doing consultancy).

Costs for a training consultancy are the costs associated with running the business and the salary earned and are, largely, fixed.

Break Even Calculation (Fixed Cost Business)
At the start of the simulation the total fee income was 3805 AUs earned from 27 days work. Therefore the average fee per day was about 141 AUs. Fixed Costs (excluding expenses recovered from clients) was 3743 AUs and the Break Even Point (where total fee income equals total costs) was 26.6 days (3743/141).

$$\textbf{Break Even} = \frac{\textbf{Fixed Costs}}{\textbf{Average Fee}}$$

Break Even Point is the point where the income line crosses the cost line and shows the point where the company begins to earn profits. For a micro, training consultancy, it can be useful to calculate two Break Even points. One using the fixed costs that must be covered (minimum salary to survive) and the other using the fixed costs that you would like (full salary to cover holidays, nice food etc.).

Margin of Safety is the difference between the Break Even Point and the current Sales Volume. At the start of the simulation, the number of days worked (27) was only just above the Break-Even point (26.6 days) and minimal profit was earned.

Improving Profits

To improve profit one could *reduce* the Break-Even Point by increasing the average fee earned per day or reducing fixed costs. Profits can be improved by increasing the number of days worked (provided there is spare time to do this).

Increasing Average Fees
Increasing the average fee earned can be achieved by increasing prices or by focusing on the high fee clients and services.

Higher Fees across the board are problematic because although they increase the slope of the income line they also reduce the volume of sales and this may overwhelm the improvement in fees per day. However, done in parallel with improving *value* to the client or where work is limited by capacity higher fees are attractive.

Client Focus involves moving away from low fee clients (such as Client Group 4) towards Client Groups 1, 2 and 3. This movement can be by focusing selling effort on the target clients, gaining new clients in the target groups or refusing work with the low fee groups

CLIENT SUMMARY - Year 0 Quarter 4	Client Group 1	Client Group 2	Client Group 3	Client Group 4
Fee Income	1080	1585	200	960
Work Days	6	8	1	12
Fee/Day	180	198	200	80

Product/Service Focus involves moving away from low fee work (such as consultancy) towards higher fee work (courses A, B and C).

COURSE SUMMARY - Year 0 Quarter 4	Consultancy	Course A	Course B	Course C
Fee Income	1180	1240	800	585
Work Days	14	6	4	3
Fee/Day	84	207	200	195

Reducing Fixed Costs
In the example, Fixed Costs would need to be reduced by about 4% to equate to increasing the number of days worked by one day and this might be very difficult.

Increasing Days Worked
This can be done by reducing prices, increasing sales to existing clients or gaining new clients. But the ability to increase days worked can be limited by capacity.

Lower Fees should increase the number of days worked but will reduce the slope of the income line (increasing the break-even point) and this reduction may overwhelm the increase in work.

Increasing sales to existing clients involves selling effort that may increase the work in the existing location, expanding to other client locations or increasing the range of courses and services offered.

Gaining new clients involves increasing the prospecting/marketing effort for the most attractive client groups. (However, gaining new clients is usually much more expensive than increasing sales to existing clients.)

Capacity Issues: Where there is surplus capacity this is not an issue. But where, as was the starting situation in the simulation, the business is operating at full capacity then one needs to see if non-fee earning work can be reduced. Specifically, reduce administration, servicing, selling, prospecting and development time. Except for reducing administration time, reducing servicing, selling, prospecting and development time will reduce long-term income and profits.

Break Even Calculation (Variable Cost Business)

Here, instead of using the average fee (price) per unit, you use the average *margin* per unit. (Where margin is average price per unit less variable cost per unit.)

$$\textbf{Break Even} = \frac{\textbf{Fixed Costs}}{\textbf{(Average Price – Unit Cost)}}.$$

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