Maximizing revenue

Science, Mathematics

Maximizing Revenue for SaaS Industry Through a trend in revenue of SaaS companies which are primarily concerned for marketing the so-called “ on-demand software” consisting of centrally hosted software and associated data to clients in need of the web-browser accessible software utilities, ASPs or Application Service Providers, in general, have reportedly been able to keep track of the factors that affect their revenues. With the approach of modelling or making adjustments via their ‘ Salesforce’ and ‘ NetSuite’(integrated business management software), certain SaaS organizations manage to discover that there are three avenues of growth which are crucial in determining whether or not SaaS operations within the intended niches would yield optimum figures of revenue. Apparently, these are (1) acquisition of new customers, (2) expansion by means of upselling to existing customers, and (3) retention of existing customers which, at a particular instant, bore the outcome shown above. Moreover, SaaS companies believe in the goal of ‘ profitable growth’ by keeping costs low while retaining clients at hand. Problem Statement: A math analyst interested in examining variations in the number of software units produced and the corresponding cost as a function of these units could estimate that a model function for the cost that is constrained to one type of software product is: C(x) = 32. 5x3 - 70, 000x where ‘ x’ refers to the quantity of software units (in thousand) If this expression merely applies to revenue increase via Salesforce with the capacity of obtaining $2, 643, 289 which represents a 36. 5% increase in revenue over a course of four quarters, (a) Find reasonable ‘ x’ that would optimize revenue. (b) Determine the selling price in part (a). If customers can only be retained within the selling price (s.

p.) range $59 ? s. p. ? $109, will the selling price found be feasible? (c) Construct a profit function based on part (b) answer. Find ‘ x’ that would maximize the profit as well as the maximum profit. Solution: For part (a), take the derivative of cost function and set to zero to get critical values (x) as follows C’(x) = 97. 5x2 - 70, 000 = 0 Solving for ‘ x’ ---? x = ± (70, 000 / 97. 5)1/2 ? ± 26. 79 Taking the positive value, x = 27, 000 units (since ‘ x’ is in thousands) For part (b), revenue R(x) = (s. p.) * x = 27, 000 * (s. p.) = 2, 643, 289 Dividing each side by 27, 000 ---? selling price (s. p.) = $97. 9 per software unit Yes, this price value is well within $59 ? s. p. ? $109 (feasible!) For part (c), Profit = Revenue - Cost ---? P(x) = 97. 9x - (32. 5x3 - 70, 000x) = 70, 097. 9x - 32. 5x3 Taking derivative of this profit function and setting to zero to get the critical x’s, P’(x) = 70, 097. 9 - 97. 5x2 = 0 ---? x = ± (70, 097. 9 / 97. 5)1/2 ? ± 26. 81 Considering the positive value, x = 27, 000 units so that upon substitution to P(x), maximum profit would be P(27) = $ 1, 252, 945. 8 (Source Article: http://www. cloudstrategies. biz/maximizing-revenue-for-saas-companies-is-more-than-customer-acquisition/)