

1) This question concerns customer profitability

Family video is a subscription based video (DVD) rental store in the Melbourne suburb of Caulfield. It charges an annual subscription fee of \$200, paid in arrears and allows its members to rent up to 2 DVDs at a time. The estimated cost to serve a customer is \$120. Family video currently has 10,000 customers, but is losing 10% of customers every year to competition. To improve its profitability, family videos is considering two strategies

1. An advertisement campaign targeted at 30,000 residents in the suburb of Caulfield at a cost of \$100,000. The campaign is expected to bring an additional 1000 customers to the store.
 2. A loyalty program to reward its existing customers which is expected to cost \$3 per customer per year (\$30,000 in the first year) and is expected to help retain half of the defecting customers.
- a) Assuming a discount rate of 10%, calculate the customer lifetime value of family video's customers
 - b) Calculate the prospect lifetime value per prospective customer. Is it worth prospecting?

Answer

a) $\text{Margin per customer} = \$200 - \$120 = \80

$$\text{Retention rate} = 1 - \text{attrition rate} = 1 - 10\% = 90\%$$

$$\begin{aligned}\text{CLV} &= \text{Margin} * (\text{retention rate} / (1 + \text{discount rate} - \text{retention rate})) \\ &= 80 * (0.9 / (1 + 0.1 - 0.9)) = \$360\end{aligned}$$

b) $\text{Acquisition rate} = 1000/30,000 = 3.33\%$

$$\begin{aligned}\text{PLV} &= \text{Acquisition rate} * \text{CLV} - \text{Acquisition spending per customer} \\ &= 0.033 * [360] - (100,000/30,000) = \$8.55\end{aligned}$$

As the prospect lifetime value is > 0 , it is worth prospecting for new clients. Note that initial margin has not been added in this equation because payments are received at the end of each year and there is no sign up fee etc. for initial margin.