CBA 2020 (Summer)

In-class Exercise

Xeroks Corporation (a hypothetical company) faces the following pricing problem for its copying machines. There are two segments of potential users: large users - whose copying needs are 20,000 copies per year - and small user - whose copying needs are 2,000 copies per year.

Xeroks found that a large user would be willing to pay as much as $25,800 for a machine, whereas a small user would be willing to pay only $6,700 maximum. These reservation prices accounted for the expected life of a machine (5 years), its resale value at the end of that period ($0), and the cost of supplies. In other words, a large user would be willing to pay $25,800 to buy a Xeroks machine provided the supplies from Xeroks were free of charge over the life of the machine. Similarly, a small user would be willing to buy a Xeroks machine for $6,700 as long as Xeroks provides free supplies. Assume that these supplies are available only from Xeroks.

Assume that there are equal numbers of large and small users. Xeroks' marginal cost of producing each of these machines was estimated to be $1,900. Its marginal cost of supplies was $0.03 per copy. Xeroks used a 10% discount rate, i.e., if it generates an income of $1 each year for five years, then its present value of that income stream is $(1/1.10 + 1/1.10^2 + ... + 1/1.10^5) = \$3.79$.

1. What should be the selling price of these machines (bundled with supplies)? (Only one price can be charged, i.e., everyone who buys must pay the same price, and the buyer must pay immediately.)

2. Xeroks wonders if it can make more money leasing the machines instead of selling them. The leasing policy will involve a yearly rental charge (payable at the end of each year) and a charge per copy made (monitored via a metering device on the machines) cumulated over each year and payable at the end of the year. Only one leasing plan - i.e., a single rental charge and a single per copy charge - is being contemplated. What should be Xeroks' leasing policy? (Assume that each user also uses a 10% discount rate.)

3. Which of the above two plans works better? Why?