

Switching Costs

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Slide 1

Model of ISP

c = cost per month Internet access.

In competitive market $p = c$.

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Switching costs

s = cost to customers of switching ISPs.

d = discount for first month usage

New provider: pays $p - d$, has cost s .

Old provider: pays p .

After first month: both charge the same price p .

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Analysis

r = (monthly) interest rate

Switching condition:

$$(p - d) + \frac{p}{r} + s > p + \frac{p}{r}.$$

Competition makes customer indifferent:

$$(p - d) + s = p.$$

Conclusion: $d = s$

Competition makes profit zero:

$$(p - c) - s + \frac{p - c}{r} = 0.$$

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Analysis, continued

Rearrange:

$$p - c + \frac{p - c}{r} = s, \quad (1)$$

or

$$p = c + \frac{r}{1 + r} s. \quad (2)$$

Equation 1: *the present value to the ISP of a new customer is just equal to that customer's switching cost.*

Equation 2: *price of service is a markup on marginal cost, where the amount of the markup is proportional to the switching costs.*

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Conclusion

Adding switching costs to the model raises the *monthly* price of service above cost, but, competition for this profit flow, forces the *initial* price down. Effectively, the producer is investing in the discount $d = s$ in order to acquire a flow of markups in the future.

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Additional revenue from advertising

a = advertising revenue generated by the consumer each month.

Zero-profit condition requires

$$p + a - d - c + \frac{p + a - c}{r} = 0,$$

Since $d = s$, we can write

$$p = c - a + \frac{r}{1 + r}s.$$

What is relevant is the *net* cost of servicing the customer, $c - a$, which involves both the service cost and the advertising revenues.