0.1 Switching Costs, Networks, and Language

Discuss David’s Qwerty paper and Liebowitz’s criticism of it. What is David’s point? What is Liebowitz’s point? What do you make of this?

Network externalities can in principal trap you into technically inferior technologies. Didn’t happen in our experiment.

Learning costs and lock-in were important.

Examples, operating systems, software, printers and printer cartridges, razors and blades, internet suppliers, bank loans, brokerage firms, online sellers Amazon.

Varian’s model of switching in simplest form.

Competitive model with lock in, two period version, firms not able to commit to period two prices. Smart buyers, smart sellers.

\( s = \text{switching cost} \quad c = \text{marginal cost of producing.} \) Every consumer thinks the service is worth \( v \) per period. Assume \( v > c \) and \( v < c + s \). Price will be \( v \) in period 2, because you are locked in. Nobody will sell to you at less than \( c \) and cost would be \( c + s \). But then value of a customer is \( v - c \). Competition forces a discount of \( v - c \) in period 1. Therefore period 1 equilibrium price will be \( c - (v - c) = 2c - v \). Firm loses money in period 1, makes it back in period 2.

Model of printers. Two different types of consumers, monopoly supplier. See handwritten notes based on Varian’s model.

0.2 Language as a Network externality

King and Church model two languages English and French.

Payoff to any individual depends on how many people he can talk to \( v(N) \). There are \( E \) native English speakers and \( F \) native French speakers. You can learn the other language at a cost \( c \). Assume that one language has more native speakers than the other. \( E > F \) for Canada. (But \( F > E \) for France.) What is efficient? What is Nash equilibrium? What is not efficient?

1) Both learn the other language.

2) Larger population learns other language.

Within this model, efficient outcome is either nobody learns other language or some, perhaps all of the minority group learn majority language.

What is Nash equilibrium?

What is not N.E. Both types learn other language.

Could be Nash equilibrium for either group to learn other’s language.

Could be Nash equilibrium for nobody to learn other language.

Depends on cost relative to benefits. Show how this works.

What are policy implications? What is missing from the model. Do you think that Quebeccois would be fond of this paper? How could they refute it?

Why do minority languages disappear? Is this a bad thing? Why?
Advantage of being a world language. We would be willing to pay to have everybody speaking English. Do we pay?