Discussion on: “Switching Costs and Dynamic Price Competition in Network Industries”

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Motivation

- Network externalities affect preferences – which products consumers like to consume?

- Switching costs are a constraint on the ability of consumers to migrate from one product to another.

- Seems reasonable to view the paper as asking: “how do switching costs affect competition with network externalities?” (rather than the other way around)

- The paper relies on the dynamic games methodology and relies on simulation analysis – very impressive work and serious attempt to carefully understand what’s goin on (not always easy with this methodology!)
Questions about the motivation

- Why study how competition with network externalities is affected by switching costs, as opposed to by other dynamic factors:
  - Learning-by-doing
  - Cost reduction
  - Quality improvements
  - Advertising

- Are these factors equally interesting or is there anything special about switching costs?

- A main motivation for the paper is the recent attempts of policymakers to lower switching costs (e.g., number portability)
  - The paper finds that switching costs hurt consumers
  - But isn’t that obvious? Why would switching costs be good for consumers? If there’s no reason to believe that they would ever benefit consumers, what is the contribution of the paper to policy?
The model

- Extension of Chen, Doraszelski, and Harrington (RJE, 2009) discrete choice model with 2 networks and an outside good – the paper adds switching costs to the model.

- Consumers get an extra benefit from joining a network with a large installed base (but may still join the smaller network due to a random taste shock).

- Firms choose prices in each period and sell to:
  - Consumer who decide to switch
  - Consumers whose products died and need to return to the market

- Consumers are myopic and consider only their current utility when choosing a network.

- The 2 networks start with arbitrary installed bases and then the installed bases evolve over time according to consumers choices.

- The main question: how does the long-run dist. of installed bases looks like? How do prices evolve?
The effect of switching costs

- Existing consumers may not switch even if they can get a higher current utility at the rival network

- New consumers are myopic and should not be affected

- Two effects:
  - Less competition for existing consumers (who are locked in) $\Rightarrow$ higher prices
  - The effect should be stronger for the large firm which proportionally has more captive consumers $\Rightarrow$ the larger firm should lose market share over time
  - Firms anticipate that new consumers will stay with them longer and so compete more aggressively for new consumers $\Rightarrow$ lower prices
  - The paper argues that this effect is stronger for the larger firm since it increases its chance to “tip” the market in its favor (but why shouldn’t it make the rival more desperate and fight harder to avoid being marginalized?)
Main results

- An increase in switching costs leads to:
  - More concentration when network effects are weak and when the outside good is attractive, but may lead to less concentration otherwise
  - Lower, higher, or lower but then higher av. prices
  - Higher or lower profits

- The bottom line is not clear! Is there any general insight that we get (or does the analysis show that things are complicated and nothing can be said for sure)?
Comments – switching costs

- In reality, switching costs in network industries are prob. Endogenous to a large extent:
  - Long-term contracts with providers
  - Dedicated complements
  - Incompatible interfaces

- Is it possible to endogenize switching costs?

- The paper finds that higher switching costs hurt firms. Does that mean that each firm would like to lower or raise the cost of switching to its network?
Comments – compatibility

- Here the two networks are incompatible: a larger installed base on network 1 does not increase the utility of using network 2.

- Suppose firms can choose the degree of compatibility with the rival network – how will results will change?

- The results here are interesting since switching costs make migration harder
Comments – methodology

- The dynamic games simulations analysis is very complicated:
  - Readers cannot check the results (unless they check the programming codes)
  - Several effects interact and in the end the result is “whatever comes out of the analysis” – very hard to say why the results are what they are

- Would a two period model yield very different results?