

Cournot Oligopoly with Network Effects

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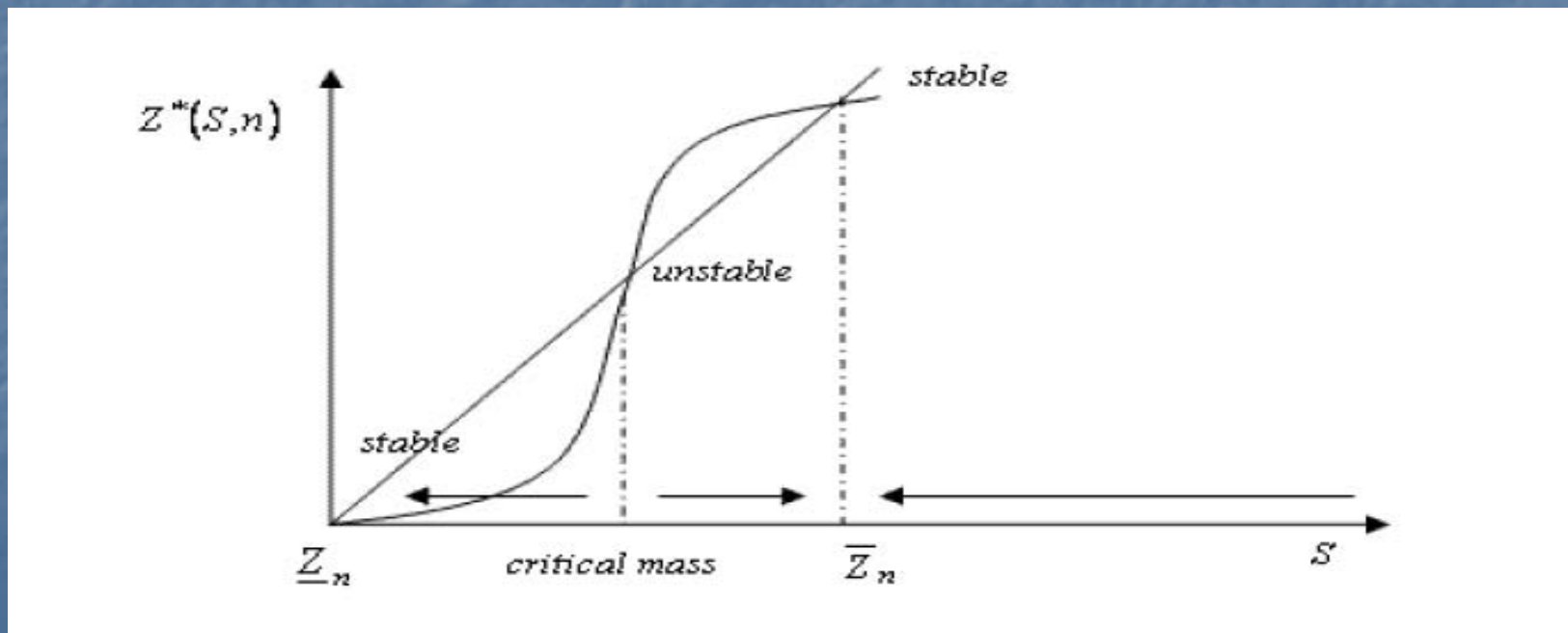
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What does this paper do?

- Standard model of Cournot oligopolistic competition with positive network externalities.
 - Value of the good increases with the size of the network
- Use lattice-theoretic methods for proving existence and stability of equilibria and doing comparative static analysis with respect to the number of firms.
- Main Contribution:
 - Nice paper that shows some known results in the literature with weaker assumptions.

Main Results

- Proving the existence of at least one (and possibly multiple) symmetric equilibrium and no asymmetric equilibria.



Main Results

- Only symmetric equilibria, we do not observe this symmetry in reality.
- Two important assumptions:
 - Assumptions imply some convexity over cost functions, 3 (capacity constraint) and 4-Convexity.
 - Homogenous goods (perfect compatibility)
- In this industries small differences between products lead to asymmetric equilibria.
- we observe leading firms that enjoyed some advantage due to scale economies.

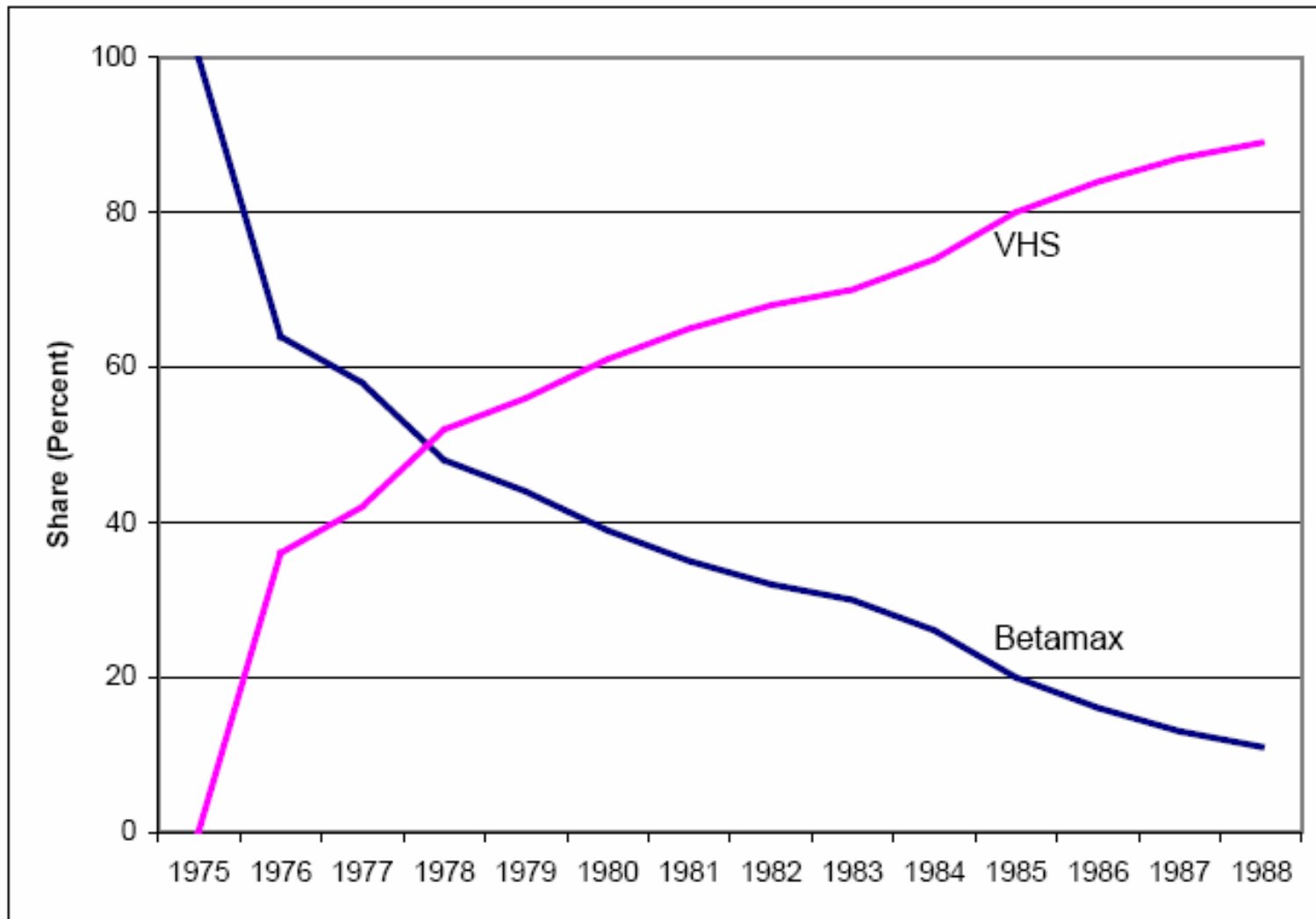
Main Results and Contribution

- Comparative statics with respect to the number of firms:
 - Total output will increase with n , but consumer welfare, prices, and individual firm profits may increase or decrease.
- Important results, there may not exist conflict of interest: Firms and Consumer may prefer the equilibrium with the highest output.
 - Very simple welfare analysis, do not consider substitutes, think about wars about different standards, many consumers may prefer for a given network size the loser standard (Netscape, Beta,...).
- It will be nice to apply this methodology in other environments that can be interesting.

Other environments

- Look at the dynamics of the entry process.
- Introducing learning for / about the two sides of the market, important because I think that the fulfilled expectation assumption is very strong.
 - Marketing can be an important element.
- Many of the market characterized by Network externalities are two sided (for example, video-games, software).
 - One side can capture the profit and control entry
- Asymmetries: differentiated goods, network effect related to the firm products, war of standards.

Betamax and VHS



Other environments

- Corruption is an phenomenon with network externalities
 - Involving in corrupt activities is more costly if there few agents involved: social norms and more resources for monitoring.
- Good setup for the methodology developed in this paper.
 - environments in which symmetry it is not a problem, and there is evidence that there are multiplicity of equilibria.