

Trading Networks and Equilibrium Intermediation

Maciej H. Kotowski C. Matthew Leister
Discussion by Péter Kondor

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Model and Results

- ▶ Endogenous network formation in a 'hot potato' model of intermediation
 - ▶ a seller values potato at 0
 - ▶ a buyer with value 1
 - ▶ layers of intermediators in between pass it on
 - ▶ each subject to i.i.d. liquidity shocks
 - ▶ each layers bid in a second-price auction for the potato
- ▶ two basic treatments
 1. What if horizontal and vertical mergers are possible for a cost? What is needed for stability?
 2. What if entry is possible for a cost? What is an equilibrium? What is the planner's solution?

Results

- ▶ an equilibrium where all with no shock bid the expected resale value: pins down equilibrium prices by backward induction
 - ▶ each likes more agents above and below in the chain (help to get and sell the asset), and dislike more at the same level
- ▶ mergers:
 - ▶ not all merge as long as liquidity shocks are sufficiently large.
 - ▶ if zero cost of horizontal mergers, all merge in each layer.
 - ▶ Agents don't benefit from horizontal competition. Vertical can go both ways (more vulnerable (if any layer defective, whole integration is), but more market power).

- ▶ free entry
 - ▶ multiple equilibria, there is one with maximal agents in each layer
 - ▶ more agents near buyers: asymmetry in the effect of shocks.
 - ▶ to get a potato need one agent not shocked upstream
 - ▶ to sell one with profit: need two agents not shocked downstream
 - ▶ closer to the buyer: less uncertainty, more profit, more entrants
 - ▶ planner does not care for profit: in planner's solution same number of agents in each layer, too little entry close to seller

Comments

- ▶ a very elegant model
- ▶ a clear analysis
- ▶ all results make a lot of sense within the model
- ▶ some very interesting thoughts: but not completely clear:
What do we learn? Which are the explored mechanisms
help to understand the economy?

- ▶ under-entry: idea that agents would not fully internalize the benefit of intermediation they provide often comes out when entry is a choice (e.g. Atkenson-Eisfeld-Weill)
- ▶ more interesting: asymmetry and example on mergers
 - ▶ asymmetry:
 - ▶ comes directly from assumptions: profit is more sensitive to competition across buyers than across sellers
 - ▶ Perhaps it is true in some contexts: which?
 - ▶ in general what counts is the structure of uncertainty on demand and supply.
 - ▶ Perhaps it can be characterized in a way to map to industries. Perhaps testable.

- ▶ example on mergers:
 - ▶ private information and adverse selection is endogenous to the network formation smaller bids when competing against a conglomerate
 - ▶ An interesting thought. What does it imply?
 - ▶ why not developed to a proposition? It might even be testable in some ways.
 - ▶ in a less specific model (e.g. with quantities) might have welfare consequences. Agents might trade less in fear of adverse selection when the conglomerate is present.

▶ bigger picture

- ▶ asking IO questions in networks of models is a very promising way forward
- ▶ (for future work:) why focusing on hot potato model?
 - ▶ quantities and prices are set in a very specific way.
 - ▶ links are either work or not: it is not possible to divide the flow across intermediators
 - ▶ perhaps network tools pushes us to this direction, instead of economics?
- ▶ (perhaps not surprisingly), I find it more natural to think of equilibria determined by demand and supply curves.
 - ▶ A better comparison with existing IO models
 - ▶ simpler connection with data
 - ▶ more natural welfare analysis
 - ▶ (e.g. extending Babus-Kondor (2013) with producing firms instead of dealers, asymmetric expected private values (sellers/buyers) might work.)

Sum-up

- ▶ elegant model and analysis
- ▶ delight to read
- ▶ perhaps more work on
 - ▶ the connection between demand and supply side competition and asymmetry
 - ▶ the example on mergers
- ▶ would be helpful