

# Comments on “Two-sided heterogeneity and trade” by Bernard, Moxnes and Ulltveit-Moe

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# This paper

- Provides theoretical model of international trade at buyer-seller level
  - Melitz type of firm heterogeneity + intermediates
- Provides empirical evidences using Norwegian micro-trade data (buyer and seller level).
  - Exporter-importer transaction level data

# Findings

- The extensive margin of the number of buyers explains a large fraction of exports
- Large exporters reach more customers (extreme concentration)
- Many firms with few connections and a few firms with many connections
- Negative degree of assortativity in matching. Larger exporters reach importers who buy from a relatively smaller number of Norwegian firms

# Contributions (Trade literature)

- Trade literature:
  - From macro to micro, then
  - From micro (firm level) to “very micro” (firm x product level) and “super-micro” (firm x firm transaction level)
- Missing aspects in literature:
  - Firm heterogeneity: mainly exporter’s productivity and behaviours
    - Almost unknown two-side heterogeneity
  - Supply chain, Global value chain(GVC): parts and components trade
    - difficult to measure micro-level supply chain (product level of trade data, IO table)
- This paper fills in these gaps

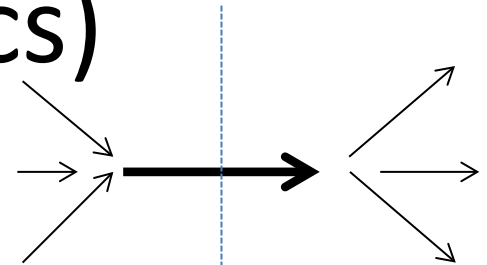
# Contributions (Network analysis)

- Social and economic network analysis: Jackson (2008):
    - Characteristics of networks
      - 1. Number of networks (degree)
      - 2. Centrality
      - 3. Assortivity
    - Network formation
      - Random creation
      - Strategic (cooperative and non-cooperative)
      - Dynamic aspect: Learning and diffusion of networks, Stability
  - A growing empirical research (application to applied economics)
    - Case of Japan: Book by Watanabe et al. (2015)
    - Bank-firm relationship (Uesugi et al.)
    - Firm transaction networks (Todo et al. 2014, etc)
    - R&D partnership
  - This paper is the first application to firm-level international trade (exporter-importer relationship)
    - c.f. FTA networks (Furusawa and Konishi, 2005), macro-level global arms trade networks (Akerman and Seim, 2014)
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- The diagram consists of the text 'This paper' on the right side of the slide. Three blue arrows originate from this text and point to specific items in the list: one points to '1. Number of networks (degree)', another points to '3. Assortivity', and a dashed blue arrow points to 'Random creation'.

# Comments (theory)

- The model is based on well-known CES function type of monopolistic competition with iceberg trade costs
- A bit special function form
  - No price competition (Num of firms)
  - Number of varieties
  - All trade costs transfer to buyer side
  - No strategic relations
- Once we move on to estimations based on theory, is it possible to check robustness on function form or test other type of function forms (e.g. linear demand)?

# Comments (empirics)



- Centrality issue
  - How do we deal with wholesalers or indirect trade?
    - Wholesalers are important in trade (trade intermediaries). Some transactions are dealt by wholesalers.
    - “Bridge”
  - Some firms might be a key (“bridge” or “high centrality”)
    - Even small agents might be sometimes key
- Dynamic network formation
  - How do we study change of partners? Switch partners
  - Network theory says that network formation is in iteration and learning process (not always random network formation) and accumulation/concentration of networks (“snowball effect”)

# Comments

- Ownership
  - Ownership might affect transaction and search process. Sometimes make bias.
  - Many transactions in intermediate inputs are relation-specific and might be inter-related firms/affiliates. (e.g. Asian fragmentation and JPN FDI and outsourcing)
  - Transactions between affiliates or related firms (e.g. M&A, FDI, group company, etc.) might be different from usual transaction...