Discussion of
The Elusive Pro-Competitive Effects of Trade

Costas Arkolakis, Arnaud Costinot, Dave Donaldson and Andrés Rodríguez-Clare

Oleg Itskhoki
Princeton University

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• Decomposition of **gains from trade**:

<table>
<thead>
<tr>
<th>Direct Effect (intensive margin)</th>
<th>Entry (new varieties)</th>
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<td><strong>Krugman (1980)</strong></td>
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\[
\varepsilon = \sigma - 1 \\
\varepsilon = [\sigma - 1] + [\theta - (\sigma - 1)] = \theta
\]

• ACR’s welfare formula (CES + Pareto):

\[
\hat{W} = \hat{\lambda} - \frac{1}{\varepsilon}
\]

• Trade elasticity \( \varepsilon \):
  — Gravity: \( X_{ij} = \delta_i + \delta_j + \varepsilon \tau_{ij} + \nu_{ij} \)
  — Micro-level discipline: \( \theta / (\sigma - 1) \)
• Decomposition of gains from trade:

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• ACR’s welfare formula (CES + Pareto):

\[ \hat{\lambda}_{\varepsilon}^{-\frac{1}{\varepsilon}} \]

• (Mis?)-interpretation of the results:
  — Selection effect on welfare is nil
  — Gains from trade are model independent (general approx.)
  — Look outside CES + Pareto for additional welfare effects
What if markups aren’t constant? Pro-competitive effects?

Generalized formula:

\[ d \log W = (1 - \eta) d \log \lambda^{\frac{1}{\theta}}, \quad \eta = \rho \cdot \frac{1 - \beta}{1 - \beta + \theta} \in [0, 1] \]

Under what conditions:

1. Demand: \( q_\omega = -\beta p_\omega + \gamma w + d(p_\omega - p^*), \)  
   s.t. (i) \( \beta = \gamma \leq 1; \) (ii) \( d''(\cdot) < 0; \) (iii) \( d(x) = -\infty, x \geq 0. \)

2. Pareto

Interpretation:

- Does not imply negative pro-competitive effects
- Gains are now model-specific (unlike in ACR), . . .
  . . . but previous formula is an upper bound
Kimball (1996) demand

- Demand aggregator (homothetic and symmetric):

  \[
  \int \Psi(C_i/C) di = 1, \quad \Psi'(\cdot) > 0, \quad \Psi''(\cdot) < 0
  \]

- Demand:

  \[
  C_i = \psi \left( \frac{P_iD}{P} \right) C = \psi \left( \frac{P_iD}{P} \right) \frac{W}{P}, \quad \psi(\cdot) \equiv \Psi'^{-1}(\cdot),
  \]

  implies \( \gamma = \beta = 1 \) and \( d(z) = z + \log \psi(\exp(z)) \)

  \Rightarrow \quad \text{ACR formula applies for a general homothetic demand}
Kimball (1996) demand

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implies \( \gamma = \beta = 1 \) and \( d(z) = z + \log \psi(\exp(z)) \)

\[ \Rightarrow \quad \text{ACR formula applies for a general homothetic demand} \]

- Klenow and Willis (2006) specification:
  \[ \psi(z) = (1 - \epsilon \log z)^{\sigma/\epsilon}, \quad \sigma \geq 1, \epsilon \geq 0 \]

  — CES in the limit \( \epsilon \to 0 \)
  — For \( \epsilon > 0 \), log-concave and has a choke price \( p^* = p - d + \frac{1}{\epsilon} \)
  — \( (\sigma, \epsilon) \) conveniently parameterizes demand and markup elasticity
Kimball (1996) demand

Figure 1: Demand function with real rigidities

relative price \( \frac{P_s}{P_i} \)

relative demand \( \frac{Y_s}{Y_i} \)

\( \varepsilon = 0 \)
\( \varepsilon = 1 \)
\( \varepsilon = 5 \)
\( \varepsilon = 10 \)
Pareto distribution

- Pareto is the **key assumption** (ACDR show it’s not CES)

- Why do we like Pareto?
  - Tractability — **still the case**
  - Firm size distribution — **no longer the case**

- Without CES, Pareto implies:
  1. non-Pareto size distribution
     - counterfactual
  2. stable distribution of markups, from any country
     - depends only on demand and Pareto shape parameter $\theta$
     - very sharp testable implication
Size distribution of firms
Pareto and Kimball demand

$\epsilon = 1$ (w/ $\sigma = 5$): very mild markup variability, pass-through 80%
Markup distribution shift
From DGKP (2012)

Distribution of Markups

Sample only includes firm-product pairs present in 1989 and 1997.
Observations are de-meaned by their time average, and outliers above and below the 3rd and 97th percentiles are trimmed.
Alternative Market Structures

• Two recent papers provide examples of very large pro-competitive effects:
  — de Blas and Russ based on BEJK
  — Edmond, Midrigan and Xu based on Atkeson-Burstein (2008)

• What is different?
  — Nested CES \( \infty \geq \rho > \eta > 1 \)
  — Large change starting from autarky in EMX
  — Oligopolistic comp. in EMX and Bertrand limit-pricing in dBR
  — Large firms (so not Pareto!)

• Mechanism:
  — huge markup reduction for domestic firms from foreign competition
  — moderate markup increase for exporting firms

• Is it large firms or simply a departure from Pareto?
  — easy to check in a simple calibration
Two ways to interpret results:

1. Elusive pro-competitive effects

2. If you want to study pro-competitive effects, you have to depart not just from CES but also from Pareto assumption