

Discussion of: “Economies of Scope and Relational Contracts: Exploring Global Value Chains in the Automotive Industry”

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Relational Contracts in GVCs

From the 2020 World Development Report (p.14):

GVC trade exhibits two features that distinguishes it from traditional trade: hyperspecialization and durable firm-to-firm relationships.

- ▶ An abundance of research on the former (hyperspecialization)
- ▶ Much less systematic empirical work on the latter (durable firm-to-firm relationships)
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- ▶ Conceptually: Clearly strikes a chord, that there is a relational dimensional to sourcing decisions – at least for some inputs – within GVCs.
- ▶ **But...** data hurdles:
 - ▶ Need the identities of lead firms' suppliers, for a clearly-defined set of inputs.
 - ▶ Need panel data, in order to measure the duration of a buyer-supplier link.

This paper

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Takes a cut at these issues through the lens of buyer-supplier relationships in automobile manufacturing:

- ▶ Uses detailed information on US-based firms' imports of HS10 products (from the LFTTD).
- ▶ Exploit Manufacturer ID (MID) code to pin down identity of each foreign supplier
- ▶ Caveats: Focus on US- and JP-owned vehicle manufacturers (VMs) only. Excludes domestic suppliers.

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Takes a cut at these issues through the lens of buyer-supplier relationships in automobile manufacturing:

- ▶ **Key finding:** Big contrast across US- and JP-owned VMs in input sourcing patterns.
- ▶ Controlling for FEs and other covariates, JP-owned VMs have:
 - ▶ a smaller number of suppliers;
 - ▶ higher supplier HHI;
 - ▶ higher related-party trade share; and
 - ▶ longer supplier longevity.
- ▶ Quantitatively, Japanese ownership (or “organizational strategy”) explains more variation in input sourcing patterns than other product-level characteristics associated with transactions-cost theory.

Where this paper is parked

Within the broader literature: (c.f., Bernard and Moxnes 2018; Antràs and Chor 2021)

1. Evidence on firm-to-firm links:

- ▶ From cross-border trade transactions.

E.g.: Argentina and Chile (Blum et al. 2010); Norway (Bernard et al. 2018); Colombia (Eaton et al. 2016, Benguria 2021); Mexico (Sugita et al.); and others. . .

- ▶ From domestic VAT data.

E.g.: Belgium (Bernard et al. 2019; Dhyne et al. 2020); Chile (Huneeus 2018); Turkey (Demir et al. 2021); Costa Rica (Alfaro-Urena et al. 2021); Ecuador (Adao et al. 2020); and others. . .

2. Evidence on the *duration* of firm-to-firm links:

- ▶ Exploiting the MID in US data: Kamal and Monarch (2018); Monarch and Schmidt-Eisenlohr (2017); Monarch (2020).
- ▶ From French data: Martin, Mejean and Parenti (2020).
- ▶ Broad takeaway fact: Newly-formed links are quickly broken. But conditional on survival, durable buyer-supplier relations emerge.

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3. Studies on relational contracting in specific markets, often in developing country settings:
 - ▶ E.g.: Macchiavello and Morjaria (2015, 2020), Macchiavello and Miquel-Florensa (2018), Cajal-Grossi et al. (2020), Brugués (2020)
4. Teardown analyses. E.g.: Dedrick et al. (2010) and the iPod.

Broad-stroke Comments

- ▶ An exciting empirical setting:
 - ▶ A happy middle-ground beyond broad cross-sectional empirical work and studies that drill into a specific industry/market.
 - ▶ Autos: A natural industry to study. Lots of inputs, and deeply enmeshed in GVCs.
- ▶ Particularly like the results on number of suppliers per HS10 product
 - ▶ An issue of growing importance with the renewed emphasis on “supply chain resilience” in an age of covid and trade tensions.

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- ▶ Particularly like the results on number of suppliers per HS10 product
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- ▶ Input I hope to supply:
 - ▶ Sharpening the empirical work
 - ▶ Comments on economies of scope
 - ▶ Other interpretations of the “JP-ownership” effect

1. Sharpening the empirical work

Main finding is very striking. But would seek clarification on:

- ▶ Average number of suppliers. US: 6.2 (sd: 3.4) vs JP: 1.7 (sd: 0.5).
 - ▶ To what extent could this be an artefact of the MID construction?

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Is this: Toyota Motor Manufacturing de Baja California?

Or: Toyota Motor Manufacturing de Guanajuato?

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 - ▶ In principle: Can use information in the trailing digits to further distinguish locations of the foreign supplier.

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- ▶ Average supplier longevity. US: 1.787 (sd: 1.037). JP: 1.575 (sd: 1.894).

- ▶ Difference in means is *prima facie* a bit hard to reconcile with more pervasive use of relational contracting by JP-owned VMs.

1. Sharpening the empirical work (cont.)

- ▶ How similar/different are the sets of HS10 products imported by US- and JP-owned VMs import?

Would consider running checks:

- ▶ limiting to the subset of imported products for which there is overlap, i.e., that are actually imported both by at least one US- and one JP-owned VM.
 - ▶ limiting to imports from unrelated parties, to speak more directly to the transactions-cost theory.
- ▶ Standard errors:
 - ▶ Currently cluster by VM-product. Try two-way clustering by VM and by product instead.

2. Economies of scope

Preferred explanation: Economies of scope across suppliers.

Inspired by Kojima Industries Co., some suggestions to explore whether this is indeed what is driving the JP-owned VM effect:

- ▶ Would like to see summary statistics on the number of products exported per foreign supplier to US-/JP-owned VMs (“outdegree”):

Is this larger for JP-owned VMs?

- ▶ Look *within* buyer-supplier links. Does:
 - ▶ the number of products per supplier;
 - ▶ the total value purchased from each supplier;
 - ▶ unit values (quality) of each product;

increase over time?

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Some room to develop a model here:

- ▶ A transactions-cost model with fixed costs incurred per distinct supplier (rather than per product)?
- ▶ On the other hand: If each supplier is responsible for more inputs, wouldn't we run into diseconomies of scope within each supplier? (Kikuchi et al. 2018, Fally and Hillberry 2018)

Would be very helpful to clarify the tradeoffs confronting lead firms should they entrust the sourcing of more inputs to each supplier.

3. Other Interpretations of the JP effect?

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- Do JP-owned VMs place more emphasis on supplier morale, loyalty?

Kojima Industries Corporation is a business partner of Toyota Motor Corporation and manufactures interior and exterior automobile components

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HOME > Company Information > Company Concept

Company Concept

Company Policy

和
Harmony

Not only harmony within the company, but also the integration of harmony on a broader scale is essential.

In other words, integration that is based on family harmony leads to the development of the company, the local community, and international society. It is this concept that is the fundamental spirit of our company.

Long-term themes:

“We train and protect people.”
“Conversation and Participation”

3. Other Interpretations of the JP effect?

- ▶ Another aspect of culture: Are JP-owned VMs more patient?
(Baker et al. 2002; Kukharskyy 2016)
- ▶ Is relational contracting a way to promote learning-by-doing by suppliers, e.g., to improve quality? (Is this the “tenacity” of Kojima?)
- ▶ Do JP-owned VMs prefer to rely on relational contracts, to avoid otherwise depending on the US legal system to enforce spot contracts?
- ▶ Do they place a greater premium on being able to respond more quickly to demand uncertainty, using their network of trusted suppliers?

These alternative interpretations could affect the conceptual positioning of the paper!

Conclusion

- ▶ To reiterate: Exciting empirical setting!
- ▶ A great opportunity to shed light on input sourcing patterns – including relational contracting – across firms within an important industry.
- ▶ A lot of potential to explore many other consequential issues. E.g.:
 - ▶ Are JP-owned or US-owned VMs more resilient in the face of shocks such as covid-19?