

3PLs in the automobile-automotive GPN

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AAG
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Agenda

1. Objectives & literature
2. Methods & data
3. Very preliminary findings

1. Objectives

- Based on the AA dataset, examines the intersections of Third-Party Logistics (3PL) suppliers & lead firms in passenger vehicles manufacturing
- Specifically, to examine the roles of 3PLs (supply chain management + lead logistics provider) in the organizational configuration of automobile-automotive GPN (AAG) – with special focus in Asia

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Literature - Auto

- GVC of auto supply chains (Sturgeon, van Biesebroeck & Gereffi, 2008 in *JEG*):
 - Product complexity → relational form of governance (uncodified & tacit knowledge)
 - Dominated by a few lead firms in automotive → no industry-level standards
- Upgrade (Ozatagan, 2011 in *EPA*):
 - Upgrading via insertion of suppliers into modular VCs (diffusion of knowledge)
 - Still asymmetry of power with the lead firms
- Institution – Chinese policies in automotive VC (Holweg, Luo & Oliver, 2009 in *IJTLID*)

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Literature – 3PLs

- Outsourcing → rise of 3PLs, not just parts of service input (*cf.* van Egeraat & Jacobson, 2005 in *EG*)
- Nature of logistical requirements varies along GPNs (Rodrigue *et al.*, 2006)
- 3PLs as the “missing links” (Coe, 2014 in *RIPE*):
 - 3PLs “as a multi-actor value-generation network with its own strategic and upgrading dynamics” (p. 224) → value-added in GPNs
- ❖ Limited works on roles & importance of 3PLs in auto, esp. for the **SCM (JIT & JIS)**

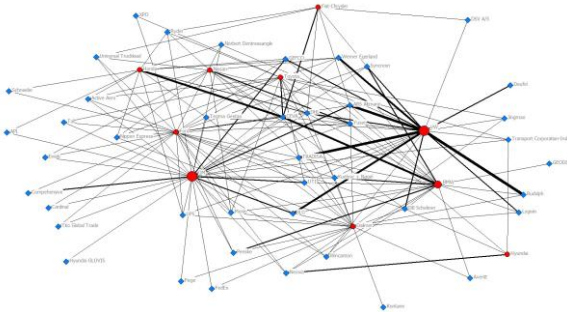
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2. Methods

- Armstrong & Associates, Inc. (A&A) Third-Party Logistics (3PL) market research
- Limitations:
 - Binary data
 - No specific geog for each 3PL
 - Duration: 2014
- Procedures:
 - 43 3PLs x 565 auto (including parts, motorcycles, trucks; multiple entries)
 - Cleaning & grouping: 43 3PLs x 65 auto
 - Further grouping on auto: 43 3PLs x 20 automobile groups (after deleted Proton, Saab, Subaru, Tesla), & **top 10** auto groups

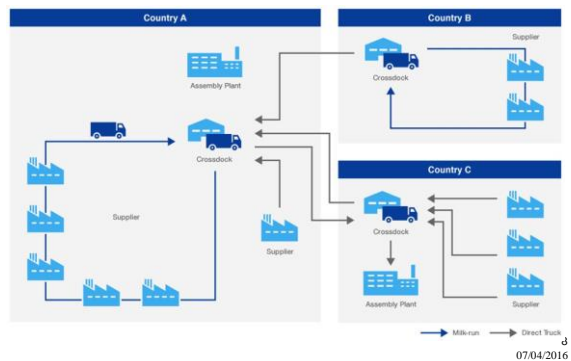
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3. Top 10 Auto Groups & its 3PLs linkages
(line thickness:# of deals)



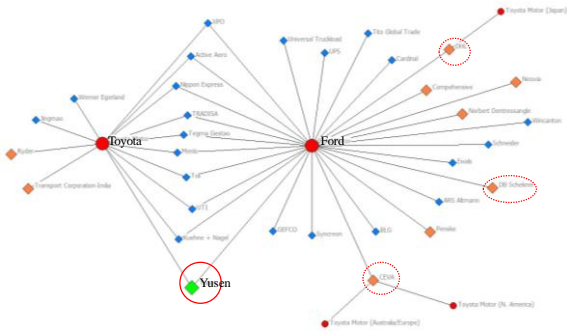
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Milk-run between suppliers & cross-docking according to production plans & purchasing orders for JIS & JIT delivery



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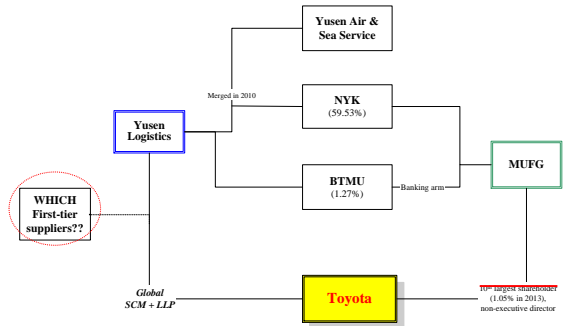
Toyota, Ford & its SCM 3PLs



Brown nodes: 3PLs with SCM to Toyota / Ford

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The cross-holding ownership of Toyota & Yusen



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Preliminary conclusion

- 3PL, esp. Yusen appears playing an important role in the supply chain management, & hence, the organizational configuration of automobile-automotive GPN (AAG) for Toyota (vis-à-vis Ford)
- Does organizational form of automobile lead firms matter?
- Linkages with suppliers, trend from 2005, ...

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