ONLINE APPENDICES

Online Appendix A Examples of Variations in Supply Network Structures*







Figure A2: GM Supply Network for Exterior Components

Figure A3: FCA Supply Network for Interior and Electric Components



FCA

Figure A4: FCA Supply Network for Exterior Components



* These networks are generated based on information obtained from Mergent Online database (2020). We excluded suppliers not in the relevant automobile sector. For example, while Microsoft provides software products (i.e., MicroSoft Office Suite) to many firms, it is not on our supply networks, as it is not in the relevant automobile components industry.

Online Appendix B Profiles of Interviewees

Candidate	Job Title	Industry	Years of Experience	Years of Experience in Procurment		
1	Executive Director (Electrical Systems and Advanced Product Purchasing)	Automotive	23	10		
2	Senior Director, IT Purchasing and Supplier Management	Pharmaceutical	33	25		
3	Director and Global Lead for Purchasing and Supplier Quality Processes	Automotive	31	29		
4	VP – Procurement, Supply Chain and Planning	Building Construction Material	33	33		
5	Strategic Supplier Management Lead	Building Construction Material	31	21		
6	President	Food and Agricultural Products	30	22		

Online Appendix C Interview Protocol

Interview Protocol

Break the Ice

- 1. Self-introduction and a brief overview of our research objectives.
- 2. Explain terms used such as financial squeeze.
- 3. Ensure the anonymity of the interviewees.

Understand the Business Background of Interviewees

Preparation Items: Download interviewees' business profiles from LinkedIn, if available. Highlight work experience in LinkedIn. Use as references for the following questions:

- 1. Please describe your work experience. How many years have you worked? What industries have you worked in? What are your roles and responsibilities?
- 2. What is your latest job title and responsibilities? How many years have you worked in your current job?

Verification of the Existence of Financial Squeeze

- 1. Have you ever seen financial squeeze in your industry? What is your perception of the frequency of financial squeeze? Please elaborate.
- 2. Has your firm ever used financial squeeze strategy toward your suppliers? If so, could you share what has happened?
- 3. Do you have close observations of financial squeeze from your trading partners (customers and suppliers) or competitors? If so, could you share what has happened?

Supplier Response Strategies

- 1. What are different ways that suppliers respond to financial squeeze? Please describe in detail.
- 2. If we were to order the sequence of supplier responses, what would it be?

Outcome of Financial Squeeze

- 1. What are the outcomes of financial squeeze? Can you provide specific examples?
- 2. Do you have anything else to share on this topic?

Exit

1. End the interview and thank the interviewee.

Online Appendix D Calculation of Mean Unit Variable Cost and Unit Price

Notations:

- U_{VariableCost}: (Unit Variable Cost)
- Q: Quantity
- F_{tfx}: Total Fixed Cost per 100 Units
- P_{price_marakup}: Price markup, can be seen as a proxy for gross profit margin

Parameter Settings

- U_{VariableCost} for Raw Material = 1
- Q = 100
- F_{tfx}= 1.7* U_{VariableCost} *Q
- $P_{\text{price}_{markup}} = .25$

<u>Formula</u>

 $Unit_Price = (F_{tfx} / 100 + U_{VariableCost}) / (1-Target Profit)$

Example of Raw Material Price Calculation

Unit_Price Raw Material Charges to Its Customers = (1.7*100/100+1)/(1-0.25) = 3.6

Example of a middle-tier supplier, S22, Price Calculation

S22 is supplied by two lower-tier suppliers, RM4 and RM5.

- $U_{VariableCost}$ for S22 = 3.6 + 3.6 = 7.2
- F_{tfx} for S22 = 1.7*7.2*100 = 1224

Unit_Price S22 Charges to Its Customers = (1224/100 + 7.2)/(1-0.25) = 25.92

Online Appendix E Logic for Rejection Based on Size and Centrality Scores

TotalPowerToReject = DegCentralityScore + Psz

Psz = Size of the agent which is randomly drawn from uniform distribution from 0 to 1.

Network Agents	S1	S21	S22	RM	RM2	RM3	RM4	RM5
% of Transactions Resulted in Negative Profits	21.20%	19.90%	19.40%	21.10%	20.80%	22%	23.10%	23%

Online Appendix F Acceptance Only Option – Percentage of Transactions Resulted in Negative Profits