Upstream Collusion and Vertical Contracting: US Canned Tuna Cartel

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1 Background and Research Question

Cartel agreements in intermediate goods markets, such as canned tuna, are challenging to monitor when producers negotiate prices with downstream clients. This research project aims to investigate the effects of vertical bargaining on the stability of list-price fixing cartels, focusing on the US canned tuna cartel involving StarKist, Chicken of the Sea, and Bumble Bee.

While cartels may fix list prices, individual negotiations can undermine the cartel agreement, leading to potential deviations. However, through negotiations, cartels might also engage in first-degree price discrimination, extracting more surplus from retailers. This project aims to empirically assess this trade-off by building a structural model and estimating it based on data from the US canned tuna cartel.

2 Policy Relevance

This project's contribution to the literature on cartel mechanisms (e.g., Asker, 2010; Byrne and de Roos, 2019; Starc and Wollmann, 2022) comes through the examination of a different type of collusive agreement: price-fixing over announced prices among producers of intermediate products, and how negotiations over these announced prices between cartel members and their clients affect both parties and the final consumers. The findings are particularly relevant for antitrust authorities and policymakers for three key reasons:

1. **Cartel Detection and Consumer Impact**: Overcharges due to the cartel may be minimal or even negative, depending on the extent of downstream negotiations. This complicates cartel detection, as downstream firms can push for lower input prices. However, even if price increases are limited, the cartel can still reduce consumer welfare, for example, by halting investments in product quality improvements.

2. **Downstream Market Structure and Competition**: The long-term effects of a cartel can reshape the downstream market by disadvantaging smaller clients who cannot negotiate better prices, potentially driving them out of the market. This reduction in competition could lead to a more concentrated market structure, with fewer players and less competitive pressure, ultimately harming consumer interests. Although this paper does not address these dynamic effects in the downstream market, a key aim of the analysis is to understand, in a static framework, the differential effects of a cartel on negotiating and non-negotiating downstream clients.

3. **Damage Claims and Legal Implications**: The ambiguous impact of cartels on downstream firms' profits poses challenges in legal contexts, particularly in damage claim cases. If downstream firms can negotiate lower input prices or adjust their markups, they might mitigate the cartel's impact on consumers. This complexity requires careful empirical analysis to accurately assess damages and ensure that legal claims reflect the true economic impact of collusion.

3 Methodology

The methodology involves building a structural model to analyze the effect of bargaining between cartel members and retailers. To estimate the model, the Nielsen dataset is used, covering prices and quantities from 50,000 US stores (2006-2018), and the Consumer Panel dataset for household-level purchases.

The methodology involves:

- **Demand Estimation**: The Berry et al. (1995) method is used to estimate consumer demand and identify wholesale and list prices through Nash-Bertrand competition modeling.

- **Cost and Bargaining Power Estimation**: During non-collusive periods, producers' marginal costs are identified under Nash-Bertrand competition. During collusion, produc-

ers set joint profit-maximizing prices. To predict the producers' marginal costs during collusion, I will fit a model over the identified marginal costs from competitive periods and use it to estimate costs for collusive periods. The study estimates bargaining power parameters for each producer-retailer pair using a Nash-in-Nash bargaining framework.

- **Cost of Getting Busted**: The model incorporates the cost of being caught by antitrust authorities, which influences the cartel members' decisions over time. This will involve estimating the fixed costs associated with cartel participation during the collusion periods.
- **Counterfactual Simulations**: Simulations examine the impact of varying bargaining power distributions on cartel stability, retailer profits, and consumer welfare.

By integrating data from Nielsen, court documents, and theoretical models, this research provides empirical evidence on vertical bargaining in list-price fixing cartels, offering insights for antitrust policy and damage claim cases.

References

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