

Economics

Essays on Competition Policy

Riku Buri



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Essays on Competition Policy

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A key challenge in cartel enforcement is identifying collusive agreements. In the first essay, together with my co-authors, we study two major Nordic procurement cartels that operated in the asphalt paving market. We find evidence that during the cartel period bids were clustered and the winning bid was isolated. We implement two cartel detection methods that exploit variation in the distribution of bids. The method developed by Clark et. al. (2020) correctly rejects competitive bidding for the cartel period in both markets. The method suggested by Huber and Imhof (2019) predicts a significantly higher probability of collusion for the cartel period in one of the markets. Our results indicate that statistical screening methods with modest data requirements can be useful for competition authorities in detecting collusive agreements.

In the second essay, together with my co-authors, we study the effects of entry deregulation in the Finnish interurban bus market. We find that the number of operators increased on routes connecting large and mid-sized cities. Increased competition resulted in 29% lower prices in the interurban bus market. Consistent with our evidence on entry, we find that prices decreased on routes connecting large and mid-sized cities, while on routes connecting smaller cities, we find no significant change in prices. We also study how the reform affected the long-distance railway market and find that increased intermodal competition resulted in a 22% price decrease. Overall, we find that the entry deregulation benefited consumers.

Most countries have adopted a merger control regime to identify and block anticompetitive mergers. However, typically only large deals must be notified to the authorities. In the final essay, I study the effect of exempted acquisitions in the Finnish private healthcare market. The Finnish healthcare market has experienced rapid consolidation, but only a small fraction of transactions have been notified to the Competition Authority. Using a difference-in-differences methodology, I find that after the acquisitions, prices in the acquired clinics rise considerably compared to non-acquired clinics. This post-acquisition price increase in acquired clinics is related to the target clinics adopting the pricing strategy of the acquirer.

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Helsinki, 7 August 2023

Riku Buri

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Introduction

This dissertation is a collection of three essays. All three essays are related to competition policy. Basic economic theory suggests that competition results in lower prices, better product and service quality, and higher productivity (Tirole, 1988). These theoretical predictions are supported by a vast empirical literature (see e.g. Holmes and Schmitz, 2010; Backus, 2020; Kwoka, 2015; Ashenfelter et al., 2014; Connor and Bolotova, 2006). Whereas competition between firms is good for society, firms have incentives to restrict it because competition typically leads to lower profits. Competition policy aims to ensure that competition is not restricted in ways that are detrimental to the economy.

In this dissertation, competition policy is studied from three different perspectives. The first essay examines the use of statistical screening methods in cartel detection, the second essay estimates the effects of entry deregulation in the Finnish passenger transport market, and the third and final essay studies the effects of acquisitions in the Finnish private health-care market. Overall, the three topics studied in this dissertation cover a substantial part of competition policy. The UK competition authority estimates that between 2019 and 2022 merger control, cartel enforcement, and market studies, which include assessing the effect of market regulation, represented approximately 90% of the total benefits generated by the authority (CMA, 2022) while the European Commission estimates that merger control and cartel enforcement account for approximately 70% of the benefits of their enforcement work (EC, 2022).

In addition to the three essays sharing a common theme, they also share a common empirical methodology. In all three essays, the focus is on estimating the effect of a particular event that affected the functioning of the market. In the first essay, this event is the start of cartel investigations in asphalt paving markets in Finland and Sweden. In the second essay, the event is the deregulation of entry in the Finnish interurban bus market. In the third essay, multiple events are studied, with each acquisition in the physician market constituting

an event.

The challenge in policy evaluation is to come up with a credible counterfactual of how the relevant outcomes would have developed in the absence of the policy change (Athey and Imbens, 2017). All three essays in this dissertation rely on the difference-in-differences methodology to construct the counterfactual. In the difference-in-differences analysis, the development of a treatment group, which is influenced by the event, is compared to a control group, which is not influenced by the event (Athey and Imbens, 2017; Angrist and Pischke, 2009). In the first essay, the control group consists of tenders in markets with no evidence of collusion before or after the Nordic asphalt paving cartel investigations. In the second essay, the development of the Finnish passenger transport market before and after the reform is compared to a set of similar European countries with no major reform in the passenger transport sector. In the third essay, the control group consists of non-acquired independent physician clinics. The key assumption in difference-in-differences analysis is that the change in outcomes over time for the control group is informative about what the change would have been for the treatment group without the event (Angrist and Pischke, 2009).

In this introductory chapter, I will briefly summarize each of the three essays. I will review the key results and policy conclusions of each essay and discuss how the findings are linked to previous literature in the field.

Essay 1 Summary: Complementary bidding and cartel detection: Evidence from Nordic asphalt markets

The goal of cartels is to increase profits. Given this, it is not surprising that comprehensive studies have found that on average cartels increase prices by 15 to 30% (Connor and Bolotova, 2006; Boyer and Kotchoni, 2015). Because cartels are harmful, countries have adopted antitrust laws that prohibit the formation of cartels. The key challenge in cartel enforcement is identifying collusive agreements. Traditionally, competition authorities have relied on whistleblowers and the leniency system to expose cartels. The leniency system en-

courages cartel members to expose the cartel by granting a total or partial reduction of fines in exchange for disclosing the existence of the cartel agreement (OECD, 2001). Recently, competition authorities have become interested in using statistical methods to identify cartels.

In the first essay, together with Aapo Aaltio, Antto Jokelainen, and Johan Lundberg, I study the bidding behavior of two cartels that operated in the Finnish and Swedish asphalt paving markets in the 1990s and early 2000s. In the first empirical section, we estimate how the distribution of bids changed after the start of the investigations. In the second empirical part of the paper, we test the performance of two established cartel detection methods developed by Clark et al. (2020) and Huber and Imhof (2019). We focus on these two methods because they can be implemented using only information on the distribution of bids. This type of information is often included in large procurement datasets, which are increasingly becoming available to competition authorities. The two methods differ in data requirements from older cartel detection methods, which typically rely on observing cost data (Porter and Zona, 1993; Porter and Zona, 1999; Bajari and Ye, 2003).

We find that both in Finland and Sweden the distribution of bids changes after the launch of the cartel investigations. During the cartel, a larger share of bids are clustered within 10% of the winning bid. Additionally, during the cartel, winning bids tend to be isolated and losing bids generally are at least 1% higher than the winning bid. Together, the clustering of bids and isolated winning bids lead to a twin-peaked bid distribution during the cartel period. Similar bidding patterns have been found in cartels operating in Canada (Clark et al., 2020), Japan (Chassang et al., 2022), Switzerland (Huber and Imhof, 2019; Imhof et al., 2018) and U.S. (Feinstein et al., 1985; Abrantes-Metz et al., 2006). We find that the change in the distribution of bids after the cartel is similar in the two countries, but in Finland the change is larger.

In the second empirical part of the paper, we find that the method by Clark et al. (2020) correctly rejects competitive behavior during the cartel period in the Finnish and Swedish

asphalt markets. The second method by Huber and Imhof (2019) predicts a considerably higher share of collusive tenders before the start of the investigations in Finland. However, for Sweden, the share of tenders classified as collusive is only modestly higher during the cartel period.

Overall, our results suggest that statistical cartel detection methods, with modest data requirements, can be useful for competition authorities in identifying suspicious behavior. Our results also show that the predictive performance of different screening methods can vary even between two very similar cartels operating in the same product market. This suggests that competition authorities should use a variety of methods rather than rely on the results of only one particular method. Both methods studied in the essay have some limitations. The method developed by Clark et al. (2020) cannot be used to detect collusion for individual tenders, but rather for a group of tenders. This can be an issue if the group has a mix of collusive and competitive tenders. The method developed by Huber and Imhof (2019) can be used to predict collusion for individual tenders. However, it requires training the model with existing data from both collusive and competitive tenders. A clear limitation of the method is the availability of suitable data to train the model and whether the data used to train the model generalize to the data for which the model is used for prediction.

Essay 2 Summary: The effects of entry deregulation: Evidence from passenger transport

Market entry plays a key role in the functioning of markets. When a private firm considers whether to enter a market, it compares the costs and revenues associated with entry. However, market entry also affects other market participants. New entrants might steal business from existing providers. They can also increase consumer surplus by reducing prices or increasing variety. Due to the wedge that exists between the private and social benefits of entry, free entry can result in suboptimal outcomes. This can motivate the government to regulate entry into the market (Mankiw and Whinston, 1986). While there might be good

reasons to regulate entry, government entities can be captured politically, and they may pursue other goals than maximizing social welfare. A concern is that entry restrictions are designed to maximize industry profits (Stigler, 1971).

In the second essay, together with Miika Heinonen, Jonatan Kanervo, and Joel Karjalainen, I study the welfare effects of entry deregulation in the Finnish interurban bus industry. The deregulation effectively took place in 2014. Before deregulation, local governments granted companies traffic permits. The stated goal of the policy was to ensure the availability of interurban bus services in less densely populated areas by combining the obligation to serve routes connecting smaller cities with monopoly rights to serve routes connecting large cities. Whereas the regulatory system potentially increased the availability of services in less densely populated areas, it restricted entry and competition on popular routes.

We find that after the reform, entry increased on routes connecting large and mid-sized cities. The increased competition resulted in 29% lower average prices in the long-distance bus market. Consistent with our evidence on entry, we find that prices decreased on routes connecting large and mid-sized cities, while on routes connecting smaller cities, we find no change in prices. The reform also had an effect on substitute markets, with long-distance train ticket prices decreasing by 22%. We also study how the reform affected the profits of operators and find that after the reform, the operating profits of the long-distance bus operators more than halved. We compare the decrease in profits with the increase in consumer surplus, and find that the increase in consumer surplus more than offsets the decrease in profits. Overall, we thus conclude that the reform had a positive effect on total welfare.

The essay contributes to the literature studying the welfare effects of entry restrictions (Hsieh and Moretti, 2003; Schaumans and Verboven, 2008; Schivardi and Viviano, 2011; Seim and Waldfogel, 2013; Verboven and Yontcheva, 2022). Similarly to what has been found in several previous studies, we find that entry regulation benefited the industry at the expense of consumers. Although our results suggest that entry regulation should be used

with caution, it cannot be applied directly to the analysis of the effects of entry regulation or deregulation in other markets. The effects of entry regulation are ultimately dependent on several market characteristics, such as the cost structure of the industry. Because of this, general conclusions about the welfare effects of entry regulation cannot be drawn on the basis of a single empirical study.

Essay 3 Summary: The ones that got away: Acquisitions in the Finnish private physician market

Recently, several studies have documented that market concentration and firm profits have increased both in Europe and in the United States (De Loecker et al., 2020; De Loecker et al., 2018; Grullon et al., 2019; Affeldt et al., 2021). Firms can increase their market power by merging with their competitors (Williamson, 1968). Because mergers can harm the economy, governments worldwide have adopted a merger control regime to identify and block anticompetitive mergers. However, in most jurisdictions, only large transactions must be notified to the authority. The reasoning behind this is that only large deals can affect competition and thus merit a review.

In the third essay, I first show that in Finland a clear majority of transactions fall outside the scope of merger control. Then, I examine the implications of this by studying the effect of exempted mergers in the Finnish private physician market. For three reasons this market provides a particularly compelling setting to study the effects of acquisitions that fall outside the scope of merger control. First, between 2008 and 2020 the three largest chains acquired over 80 smaller competitors and more than doubled their market share. Second, less than 5% of the acquisitions were notified to the Finnish Competition Authority, with the rest of the acquisitions falling below the merger control thresholds. Third, I have access to a very detailed dataset that covers almost all visits to private physicians in Finland. The dataset, which originates from the reimbursement system of the Finnish social insurance institution, covers the years 2008-2020 and contains detailed information on more than 74,96 million

medical procedures. The detailed data allows me to track the price development of the acquired and non-acquired clinics separately for each medical treatment over a long time period.

I find that, post-acquisition prices for auxiliary services, such as medical imaging and laboratory tests, increase by 20% and prices of reception times by 10%. I also find that the number of visits to the acquired clinics decreases after the acquisitions. In the second section of the paper, I study the direct mechanism through which acquisitions affected prices in the acquired clinics. I test whether changes in local market concentration can account for the estimated price changes. To study this, I split the acquisitions into in-market acquisitions, which had an impact on local market structure, and out-of-market acquisitions, where the target and the acquirer had no geographical overlap before the merger. I find that prices also increase in out-of-market acquisitions. This result implies that changes in local market concentration cannot account for all of the observed price changes post-acquisition. Instead, I find that the estimated price increases are to a large extent explained by the diffusion of pricing strategies. The healthcare chains set prices uniformly throughout Finland. I find that, post-acquisition, the prices of the target clinics are harmonized with the uniform prices of the acquirer. Because, on average, chains are more expensive than independent clinics, acquisitions in the Finnish physician market have resulted in price increases. Similar price harmonization has been found in the U.S. banking market (Granja and Paixão, 2022) and the retail market (DellaVigna and Gentzkow, 2019) while Eliason et al. (2019) finds evidence of quality harmonization in the U.S. dialysis industry.

In the final section of the essay, I study why prices in chain clinics are consistently higher than in independent clinics. Using a consumer survey, I first show that patients rate the quality of care similarly in chain and independent clinics. This implies that differences in quality of care are unlikely to explain the price difference between independent and chain clinics. Instead, I find that differences in ownership and organizational structure can explain why chains set consistently higher prices than independent clinics. Post-acquisition prices

increase more in acquired clinics that before the acquisition were owned by a nonprofit organization. This result, consistent with theoretical predictions, implies that non-profit organizations set lower prices than for-profit organizations. To study how differences in organizational structure potentially affect prices, I use a stylized economic model of the Finnish physician market. Using the model, I show that the organizational structure adopted in chain clinics, where doctors set prices for reception hours and the clinic for auxiliary services, results in double marginalization and higher prices for both auxiliary services and reception times.

This essay is related to the emerging literature that studies the implications and effects of merger control notification systems. Wollmann (2019) shows that in the U.S. a large share of mergers are exempt from mandatory notification. Kepler et al. (2022) finds evidence that in the U.S. firms structure deals to avoid merger control and that the structured deals have resulted in increased profit margins and product prices of the merging firms and their competitors. Morzenti (2022a) finds that in the U.S. after a relaxation of merger control notification system, non-notified horizontal mergers lead to a 30% reduction in patenting activity. Morzenti (2022b) studies the effects of relaxations of pre-merger notification rules in several countries and finds that they have resulted in an increase in industry-level concentration and a 2% decrease in labor share. Finally, Wollmann (2021) finds that in the U.S. dialysis industry, where prices are regulated, non-notified mergers have resulted in lower quality of care. This essay contributes to the literature by providing a detailed industry-level study showing that exempt mergers can have a significant impact on prices. Together with the emerging literature, my results suggest that merger control notification systems have big implications for the functioning of the economy. Studying the costs and benefits of increasing the scope of merger control remains an important avenue for future research.

References

- Abrantes-Metz, Rosa, Luke Froeb, John Geweke, and Christopher T. Taylor (2006) “A variance screen for collusion,” *International Journal of Industrial Organization*, 24 (3), 467–486.
- Affeldt, Pauline, Tomaso Duso, Klaus Gugler, and Joanna Piechucka (2021) “Market Concentration in Europe: Evidence from Antitrust Markets,” *DIW Berlin Discussion Paper No. 1930*.
- Angrist, Joshua D. and Jörn-Steffen Pischke (2009) “Mostly Harmless Econometrics: An Empiricist’s Companion,” *Princeton University Press*.
- Ashenfelter, Orley, Daniel Hosken, and Matthew Weinberg (2014) “Did Robert Bork Understate the Competitive Impact of Mergers? Evidence from Consummated Mergers,” *Journal of Law and Economics*, 57, 67–100.
- Athey, Susan and Guido W. Imbens (2017) “The State of Applied Econometrics: Causality and Policy Evaluation,” *Journal of Economic Perspectives*, 31 (2), 3–32.
- Backus, Matthew (2020) “Why is productivity correlated with competition?” *Econometrica*, 88 (6), 2415–2444.
- Bajari, Patrick and Lixin Ye (2003) “Deciding Between Competition and Collusion,” *Review of Economics and Statistics*, 85 (4), 971–989.
- Boyer, Marcel and Rachidi Kotchoni (2015) “How Much Do Cartel Overcharge?” *Review of Industrial Organization*, 47, 119–153.
- Chassang, Sylvain, Kei Kawai, Jun Nakabayashi, and Juan Ortner (2022) “Robust Screens for Noncompetitive Bidding in Procurement Auctions,” *Econometrica*, 90, 315–346.
- Clark, Robert, Decio Coviello, and Adriano de Leverano (2020) “Complementary bidding and the collusive arrangement: Evidence from an antitrust investigation,” ZEW Discussion Papers 20-052, Mannheim.
- Competition and Markets Authority (CMA) (2022) “CMA impact assessment 2021/22.”
- Connor, John M. and Yuliya Bolotova (2006) “Cartel overcharges: Survey and meta-analysis,” *International Journal of Industrial Organization*, 24, 1109–1137.
- De Loecker, Jan, Jan Eeckhout, and Gabriel Unger (2020) “The Rise of Market Power and The Macroeconomic Implications,” *Quarterly Journal of Economics*, 135 (2), 561–644.
- De Loecker, Jan, Yelena Larkin, and Roni Michaely (2018) “Global Market Power,” *CEPR Discussion Paper No. 13009*.
- DellaVigna, Stefano and Matthew Gentzkow (2019) “Uniform Pricing in U.S. Retail Chains,” *Quarterly Journal of Economics*, 134 (4), 2011–2084.

- Eliason, Paul J., Benjamin Heebsh, Ryan C. McDevitt, and James W. Roberts (2019) “How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry,” *Quarterly Journal of Economics*, 135 (1), 221–267.
- European Commission (EC) (2022) “Customer savings generated by the Commission’s antitrust and merger enforcement: a 10-year perspective,” *Competition policy brief*.
- Feinstein, Jonathan S., Michael K. Block, and Frederick C. Nold (1985) “Asymmetric Information and Collusive Behavior in Auction Markets,” *American Economic Review*, 75 (3), 441–460.
- Granja, João and Nuno Paixão (2022) “Market Concentration and Uniform Pricing: Evidence from Bank Mergers,” *Available at SSRN: 3488035*.
- Grullon, Gustavo, Yelena Larkin, and Roni Michaely (2019) “Are US Industries Becoming More Concentrated?” *Journal of Finance*, 23 (4), 697–743.
- Holmes, Thomas J. and James A. Schmitz (2010) “Competition and Productivity: A Review of Evidence,” *Annual Review of Economics*, 2, 619–642.
- Hsieh, Chang-Tai and Enrico Moretti (2003) “Can Free Entry Be Inefficient? Fixed Commissions and Social Waste in the Real Estate Industry,” *Journal of Political Economy*, 111 (5), 1076–1122.
- Huber, Martin and David Imhof (2019) “Machine learning with screens for detecting bid-rigging cartels,” *International Journal of Industrial Organization*, 65 (C), 277–301.
- Imhof, David, Yavuz Karagök, and Samuel Rutz (2018) “SCREENING FOR BID RIGGING—DOES IT WORK?” *Journal of Competition Law and Economics*, 14 (2), 235–261.
- Kepler, John D., Vic Naiker, and Christopher R. Stewart (2022) “Stealth Acquisitions and Product Market Competition,” *Forthcoming in Journal of Finance*.
- Kwoka, John (2015) *Mergers, Merger Control, and Remedies: A Retrospective Analysis of U.S. Policy*: MIT Press.
- Mankiw, N. Gregory and Michael D. Whinston (1986) “Free Entry and Social Inefficiency,” *RAND Journal of Economics*, 17 (1), 48–58.
- Morzenti, Giovanni (2022a) “Antitrust Policy and Innovation,” *Working paper*.
- (2022b) “Global Stealth Consolidation: Who Pays the Price?” *Working paper*.
- OECD (2001) “Using Leniency to Fight Hard Core Cartels,” *Policy Brief*.
- Porter, Robert and John Douglas Zona (1993) “Detection of Bid Rigging in Procurement Auctions,” *Journal of Political Economy*, 101 (3), 518–538.
- (1999) “Ohio School Milk Markets: An Analysis of Bidding,” *RAND Journal of Economics*, 30 (2), 263–288.

- Schaumans, Catherine and Frank Verboven (2008) “Entry and regulation: evidence from health care professions,” *RAND Journal of Economics*, 39 (4), 949–972.
- Schivardi, Fabiano and Eliana Viviano (2011) “Entry Barriers in Retail trade,” *The Economic Journal*, 121 (551), 145–170.
- Seim, Katja and Joel Waldfogel (2013) “Public Monopoly and Economic Efficiency: Evidence from the Pennsylvania Liquor Control Board’s Entry Decisions,” *American Economic Review*, 103 (2), 831–862.
- Stigler, George J. (1971) “Free Entry and Social Inefficiency,” *The Bell Journal of Economics and Management Science*, 2 (1), 3–21.
- Tirole, Jean (1988) “The Theory of Industrial Organization,” *MIT Press*.
- Verboven, Frank and Biliana Yontcheva (2022) “Private Monopoly and Restricted Entry: Evidence from the Notary Profession,” *Working paper*.
- Williamson, Oliver E. (1968) “Economies as an Antitrust Defense: The Welfare Tradeoffs,” *American Economic Review*, 58 (1), 18–36.
- Wollmann, Thomas (2019) “Stealth Consolidation: Evidence from an Amendment to the Hart-Scott-Rodino Act,” *American Economic Review: Insights*, 1 (1), 77–94.
- (2021) “How to Get Away with Merger: Stealth Consolidation and Its Real Effects on US Healthcare,” *NBER Working papers*, No. 27274.

Author's Contribution

Essay I: Complementary bidding and cartel detection: Evidence from Nordic asphalt markets

Buri developed the idea with input from Aaltio and Jokelainen. Buri and Lundberg obtained the data. Jokelainen conducted the empirical analysis with input from Aaltio and Buri. Buri drafted the paper. Aaltio, Buri, Jokelainen, and Lundberg edited the manuscript.

Essay II: The effects of entry deregulation: Evidence from passenger transport

Buri and Heinonen developed the idea and obtained the data. Heinonen conducted the empirical analysis with input from Buri. Buri drafted the paper. Buri, Heinonen, Kanervo, and Karjalainen edited the manuscript.

Essay III: The ones that got away: Acquisitions in the Finnish private physician market

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