

## Anja Rösner - Research statement

My research interests include applied microeconomics, primarily industrial organization and consumer behaviors, but also intersection to competition economics, technologies and sustainability. Currently, I am working on different projects and papers that combine the fields of individual behavior, antitrust, asymmetric information, technologies, green transitions as well as mental health in different ways.

### *Completed projects*

In the paper **Consumer Protection in the Digital Age: Evidence from the European Union** (with Justus Haucap and Ulrich Heimeshoff, DICE), I analyze the impact of an EU-wide consumer protection regulation on consumer behavior. I find that the regulation increased consumer trust and cross-border purchases especially for countries that had a very low consumer protection level before the regulation. I am very pleased that this paper is published in the *International Journal of Industrial Organization*(ABS-3).

In addition, I was part of the interdisciplinary research group **Competition and Sustainability** (with Justus Haucap, DICE; Rupperecht Podszun & Tristan Rohner, University of Düsseldorf) at the University of Düsseldorf. The core focus lied in gaining insights in the interplay between competitive markets and sustainability goals. Besides my main responsibility to contribute to the group's research environment, I was also engaged in the acquisition of third-party funding, the organization of workshops and other related administrative work. I particularly contributed to successfully acquire a substantial grant for conducting a study on behalf of the German Federal Ministry for Economic Affairs and Climate Action on **Competition and Sustainability in Germany and in the EU**. This study has been published in April 2023. Besides the actual study, the outcomes of our research were disseminated through several publications in national field journals and an international recognized book. Within this research group, I gained a lot of experience in writing several proposals for third-party funding, managing the respective projects, as well as working with a divers interdisciplinary group of researchers.

### *Ongoing and future projects*

My *job market paper* is titled **Do Consumers Care? Collusion, Inattention, and the Power of Information**. Although traditional economic theory predicts that consumers will reduce their demand when prices increase, the actual consumer behavior remains discussed for products that are purchased on a daily basis. This is due to the fact that consumers seem to have a more inelastic demand for this type of goods. With Scanner data from major retailers in the United States, I exploit collusion as a demand-independent price shock and show how consumers' daily shopping behavior is influenced by collusion. To gain a deeper insight into the mechanisms behind the effect, I leverage news data in a second step of my analysis. This allows me to determine whether consumer behavior is affected by additional information in the form of news reports about the price increase. My results show that consumers decrease their demand for former cartelized products in response to the cartel news. This clearly implies that consumers are on average inattentive to the price change itself but their attention can be shifted with towards a price increase with media reports. I also find that lower income consumers tend to be more attentive to the price increase while higher income consumers have to be informed by the media to change their shopping behavior. Additionally, the sentiment of the respective news reports plays a significant role as more negative news reinforce the effects.

In another paper, **Do Managerial Incentives Facilitate Anti-Competitive Behavior? Evidence from Collusion** (with Marek Giebel, CBS), I analyze the relationship between managerial incentives and anti-competitive behavior of firms. While most studies so far have focused on factors on the firm-level that might affect collusive behavior, it is the manager who decides whether to take part in a collusive agreement or not. In the theoretical and empirical analysis, I find that a higher share of long-term remuneration within the manager's compensation package leads to an increase in the firm's likelihood for cartel agreements. Thus, corporate governance mechanisms have to balance incentives to maximize firm profits while not creating new incentives for anti-competitive behavior.

Another project, I am currently working on, is titled **Reaching for the Society: The Commercialization Effects of NASA Technology Transfer** (with Marek Giebel, CBS). It remains under discussion how government-funded research can be effectively commercialized and how this affects the innovation behavior of third parties. In this project, I use the technology-related information and patent data of the NASA technology transfer program, a program implemented to commercialize technologies through licensing of the respective patents. I find that patents that are part of an exclusive licensing agreement within this program are cited to a higher degree. Additionally, the results reveal that their citation pattern is comparable to those of government-funded inventions developed and patented by private entities that received funding from NASA. Consequently, licensing is an important policy tool to foster commercialization of government inventions and thereby increase the

benefits of government-funded research.

In the project titled **Overconfidence and Collusion** (with Marek Giebel, CBS; Catarina Marvão, TU Dublin; Giancarlo Spagnolo, University of Rome Tor Vergata) we explore whether there is a relationship between CEO overconfidence and collusion. Overconfidence may make managers compete more if they expect to be able to outperform competitors, or it may push them to collude if they expect the cartel to be stable and not to be caught/ convicted. These contrasting theoretical hypotheses make empirical analysis crucial. We document that: (1) there is a positive and highly significant relationship between overconfidence and collusion, and (2) overconfidence Granger causes cartel participation (and not the other way around). We then discuss some possible mechanisms underlying this relationship. These findings are highly policy-relevant. They confirm that cartel enforcement should focus on the top layer of firm management and on shareholders who provide their incentives. They also suggest that CEO overconfidence could possibly be used as a screening mechanism to detect cartels.

In the project **Competition on a Food Delivery platform: The Case of Just Eat Germany** (with Melinda Fremercy, German Economic Institute; Benjamin Schröder, DICE) we are analyzing competition on the food delivery platform Just Eat Germany (*German: Lieferando*). With a unique dataset, we are able to solve the typical problem of competition economics studies: All listed restaurants have a delivery region which serves as a unique and precise measure for market definitions. On this foundation, we show in the first step that there is a relationship between competition intensity and product prices, restaurant rating, delivery time and cost. Furthermore socioeconomic characteristics of the respective market definition, such as the share of unemployment rate, credit default risk, average household composition, house types, and private/commercial properties are also correlated with competition intensity. In a heterogeneity analysis, we further show that there is a significant difference between cities and rural areas: While in cities the competition intensity is positively associated with prices, in rural areas this relationship is negative.

In another early stage project entitled **Mental Health of Employees**, I investigate the impact of modern workplace dynamics—specifically, market competition, automation, and organizational restructuring—on employees' mental health. The project leverages Denmark's comprehensive and longitudinal register data, which provides a unique opportunity to analyze these dynamics on the individual employee-level over a 20-year period. The methodology has three steps: a literature review and meta-analysis to establish a conceptual framework for mental health in the workplace, a causal analysis to identify the effects of workplace dynamics on mental health, and a heterogeneity analysis to assess how these effects differ across various individual, firm, and industry characteristics. The findings are expected to have significant implications for both academic research and practical policy-making, contributing to the broader goals of promoting health and well-being in the workplace in Denmark and beyond.

The project entitled **Green Transition Incentives of Firms, Technology Development, and the Impact on Labor Markets** (with Dario Pozzoli, CBS) has been submitted for third-party funding. Climate change is one of the most pressing problems facing modern society, and recent decades have been marked by an increasing willingness to take action. In this project, I analyze the effects of the Danish "Energiteknologiske Udviklingsog Demonstrationsprogram" (EUDP) and its direct and indirect effects for society. In a first step, I analyze how the EUDP directly affects the adoption of climate-friendly technologies and the development of greenhouse gas emissions. Regarding the indirect impacts of the EUDP, I determine the labor-related impacts of green technology adoption in firms regarding employment, wages, and labor productivity.

Another project entitled **The Impact of Generative Artificial Intelligence on Fraudulent Firm Behavior** (with Marek Giebel, CBS; Benjamin Schörder, DICE) is currently in the idea development phase. We analyze whether and how generative artificial intelligence chatbots such as ChatGPT agents can communicate with each other and reach unlawful outcomes such as collusion. We extend these considerations by determining whether the variation in the instructions given to these agents affects the outcome. We are performing the first tests and have obtained some very early-stage results.

In another paper **Uncertainty and Patenting – The Impact of Alice Corp. vs. CLS Bank on Patent Drafting** (with Marek Giebel, CBS) we analyze the impact of the legal ruling in the Alice vs. CLS bank case on inventors' drafting behavior. We are mainly focusing on the effects of the group of financial innovation and AI patents. This project is in a very early stage. We constructed patent text-based measures and obtained a sample of AI-related patents from the USPTO. We have already produced preliminary results.

An early work project that is entitled **Fraudulent Behavior of Firms and Consumers' Reaction: Evidence from**

**Media Data.** In this project, I analyze consumer behavior in response to different kind fraudulent behavior of firms. Fraudulent firm behavior encompass everything that might affect consumers, from low product quality to anti-competitive behavior to regulatory non-compliance. To analyze this relationship, I utilize press reports of firms, information from news reports, and social media data related to fraudulent firm behavior. As this project is in a very early stage, the data collection and subsequent empirical analysis are in progress and planning. I expect consumers to react heterogeneously to different fraudulent firm behavior. In a next step, I plan to extend the paper by analyzing the sentiment of the reports to determine how wording can influence consumers' reaction to different kind of news.

Another paper, entitled **Public Enterprises and Collusion** (with Justus Haucap, DICE), I am currently working on, is also related to anti-competitive behavior of firms. Cartel agreements can take place at different levels in a supply chain. If suppliers collude on the upstream level, firms on the downstream level are negatively affected by the cartel as they face higher prices or lower quantities. This implies that firms on the downstream level have a high incentive to reveal potential collusive behavior to avoid the negative effects of the cartel. In this paper, I analyze how the incentives for the downstream firms to report anti-competitive behavior change if it is private or public-owned. This project is planned to have a theoretical contribution but also an empirical analysis using firm and cartel data from the United States.

Looking forward, I plan to further work on these open projects but also pursue several research avenues related to the fields of industrial organization and its intersection with competition, consumer behavior, digitization and sustainability. For this, I continue to answer relevant, open research questions by combining profound empirical methods with unique data.

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