



C TU Berlin/PR/Christian Kielmann

#### Dear readers,

Welcome to the fifth issue of the BCCP Newsletter.

In this newsletter, we focus on topics related to climate policy, competition in markets, and behavioral aspects of consumer decision making. On the former, we provide evidence that mandatory disclosure of greenhouse gas emissions is an effective policy tool to reduce them. We further study the potential of green public procurement to reduce German carbon emissions. On the topic of competition in markets, we show that limiting competition by restricting the size of the market can be welfare enhancing. Moreover, we investigate a merger in the urban public transport industry, finding no evidence for any merger related efficiencies in this case. We then study the impact of consumers' deliberate privacy decisions in a market where firms gather shopping data information. An experiment confirms the theoretical prediction that rational buyers fully disclose information if all firms can access it. We further experimentally show that the willingness to punish norm violations is reduced when people can remain willfully ignorant. Using data from Airbnb and Booking.com, we show that scarcity cues are differently used by hotel versus peer-based hospitality platforms. Lastly, we investigate the link between overindebtedness and overconfidence. The results, based on a lab experiment, a survey analysis, and a lab-in-the-field experiment, highlight that households with high-income expectations are significantly more over-indebted.

In response to the Covid-19 pandemic, several BCCP Fellows felt compelled to contribute to the policy discussion by providing insights from their research. The Berlin School of Economics, of which BCCP is institutional partner and integral part, has launched the "BSE Insights on the Corona Crisis" series, in which BSE researchers provide short texts with scientific content on topics relevant to the crisis. In this issue of the newsletter, we re-publish the texts written by BCCP Fellows on topics as diverse as policy uncertainty and the negative effects of volatility, the importance of non-selective testing, the likely health effects of a recession, the drop in emissions due to the drop in economic activity, as well as the effects on digital platforms and potential digital mergers.

Lastly, to keep BCCP Fellows and friends connected in a time when our regular seminar series and conferences cannot take place, we took the potential of digitization seriously and organized events online. Some of our weekly seminars like the Berlin Micro Theory Seminar and the Berlin Behavioral Economics Seminar are now regularly held online. Together with several renowned international institutions, we also took part in creating the Virtual Digital Economy Seminar. This new event brings together leading academics from around the world to discuss issues of digitization with perspectives from economics and information systems. To give you a glimpse of this new activity, in this newsletter we review the discussions of a special panel session with a prominent group of international speakers on merger policy in digital markets.

We wish you an interesting reading!

Tomaso Duso

BCCP speaker

# Fighting Climate Change with Disclosure? The Real Effects of Mandatory Greenhouse Gas Emission Disclosure

Mitigating climate change is one of the major public policy challenges of our time. Under the Paris Agreement, many countries have pledged to reduce carbon dioxide and other greenhouse gas (GHG) emissions in order to limit the global temperature increase.



iStock Panksvatouny

3

In addition to traditional abatement strategies like carbon pricing and emission standards, policymakers are increasingly requiring companies to disclose information on emissions. However, surprisingly little is known about whether this measure can contribute to a reduction of GHG emissions. To fill this void, in this recent working paper, BCCP Fellow Aleksandar Zaklan and his co-authors Benedikt Downar, Jürgen Ernstberger, Hannes Rettenbacher, and Sebastian Schwenen examine this topic for a GHG emission disclosure mandate in the UK.

Their empirical strategy exploits the UK Companies Act, which imposed a mandate requiring UK-incorporated listed companies to report GHG emissions in their annual reports. Prior to the mandate, all (listed and non-listed) companies had to gather and report the emissions of their individual installations (e.g., power plants or cement plants) regulated under the European Union Emissions Trading System (EU ETS) to a publicly available register. However, complex corporate structures impeded the mapping of installations in this register to the firms they belong to. Hence, the UK disclosure mandate, by requiring the disclosure of aggregated emission data at the company level, thereby reducing costs for obtaining this information, sought to increase transparency concerning each company's GHG emissions for all interested parties.

Their results provide evidence of a significant reduction in GHG emissions after the UK Companies Act for treatment group firms relative to control group firms. The effect is sizable in its magnitude – depending on the model – between 17 and 19.5 percent over a three-year period. The emission reduction is observed for both first-time mandatory and already voluntary reporters. However, the effect is more pronounced for first-time mandatory reporters. Additional tests show that the emission reductions occur over several years and are driven by larger emitters with larger savings potentials. The effects are robust to various sample specifications, i.e., installation- and firm-level analysis, alternative control groups, and propensity score matching. Lastly, the authors find that the effect is permanent rather than transitory. They conclude that companies disclosing their GHG emissions is an effective climate policy that should receive more attention from policy makers.

The full paper >Fighting Climate Change with Disclosure? The Real Effects of Mandatory Greenhouse Gas Emission Disclosure is available as *DIW Discussion Paper* No. 1795.

### Green Public Procurement: Climate Provisions in **Public Tenders Can help Reduce German Carbon Emissions**

Given the large impact of their purchases, governments and other public authorities can exploit their procurement decisions to pursue strategic policy and welfare objectives, among which climate change mitigation is a priority. Green Public Procurement (GPP) practices that take into account the carbon footprint of products and services

in the award of public contracts can allow public authorities to reduce their carbon footprint, as well as to create demand and markets for climate-friendly options. However, there is neither a clear understanding of the decarbonization potential of GPP, nor of the status of, and barriers to, GPP implementation. To fill this gap, BCCP Fellow Olga Chiappinelli and her co-authors Friedemann Gruner and Gustav Weber provide a quantitative analysis of these elements for the case of Germany.

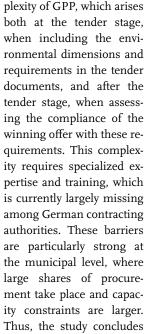
To assess the emissions that could be potentially reduced by GPP in Germany, they adopt an emissions accounting approach to estimate the amount of greenhouse gas emissions that are related to consumption and investment decisions made by the government. They find that government procurement accounts for at least 125 Megatons

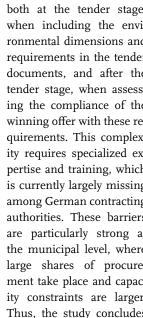
CO2 equivalents, which amounts to 12 percent of the total greenhouse gas footprint of Germany. They also find that government construction is responsible for 28 percent of total emissions of the construction sector, which suggests that construction and, in particular, infrastructure works are important areas for climate change mitigation through procurement.

To assess the status of GPP implementation in Germany, the authors conduct a survey of procurement officials across the country. Results show that the uptake of GPP is still moderate in Germany. Of all tenders awarded in the last two years across Germany, around

one quarter contained some element of GPP. Only 15 percent of contracting authorities use GPP regularly (i.e., in at least half of all the tenders they award). In addition, of the authorities adopting GPP, less than half include provisions explicitly aimed at reducing embodied emissions in their procurement procedures. Therefore, the mitigation potential of GPP could be exploited to a higher degree.

Survey results also suggest that the most important perceived barrier to broader implementation is associated with the technical com-







by suggesting that priority policy measures to realize the mitigation potential of GPP should not just include triggering political commitment to GPP at the local level but also training officials on GPP and providing effective external technical assistance service to support its implementation.

The full DIW Weekly Report >Green Public Procurement: Climate Provisions in Public Tenders Can help Reduce German Carbon Emissions is available both in English and German.

BCCP Newsletter 5/2020 COMPETITION IN MARKETS COMPETITION IN MARKETS BCCP Newsletter 5/2020

## The More the Merrier? On the Optimality of Market Size Restrictions

Competition is commonly thought of as both economically and politically desirable, ensuring efficiency and bolstering welfare. Regulation of markets, if required at all, should ensure unrestricted access and prevent oligopolies. Imperfect competition, on the contrary, is considered to be a form of market failure and a source of welfare loss.



iStock marchmeena29

However, this reasoning may be flawed, as BCCP Doctoral Student Colin von Negenborn shows in this recent working paper. Limiting competition by restricting the size of a market can, in fact, be welfare enhancing. He presents a model computing the optimal size of a given market - that is, determining the number of competitors at which the overall welfare is maximised. Thus, a regulator may prefer to curtail market entry rather than to foster it.

This surprising finding stems from the interplay of two countervailing forces. If a market is opened up and additional competitors enter, a two-fold effect arises. On the one hand, competition tightens, which drives down prices and benefits consumers. On the other hand, average production efficiency decreases, reducing welfare on both the supply and the demand sides. In his work, von Negenborn analyses when the net effect is negative, i.e. when market size restrictions are required to maximise welfare.

Regulatory policies can benefit from these insights. Oftentimes, regulation is sought to govern the entry to a market but not the price setting within a market, thus specifying the number of competitors but not their respective pricing. Examples range from spectrum auctions for telecommunications to licenses for private television broadcasters. For each of these markets, the present research can aid regulatory bodies in specifying the optimal size, showing when market entry should be restricted.

The full paper >The More the Merrier? On the Optimality of Market Size Restrictions is available as *CRC TRR 190 Discussion Paper* No. 183.

### Merger Efficiency Gains: Evidence from a Large Transport Merger in France

Many industries are seeing an increase in market concentration, leading to a discussion on the effectiveness of horizontal merger enforcement. This is fueling a growing interest in retrospective analyses of mergers. While there are a substantial number of studies estimating the price effects of large and/or controversial mergers, there is little evidence on the effects of mergers on cost efficiencies. At the same time, efficiency gains are often one of the main arguments of merging parties in front of competition authorities and constitute, in theory, a central aspect to the economic

motivation behind mergers. They constitute the primary justification as to why the merger of competitors may benefit consumers.

BCCP Fellow Joanna Piechucka and her co-author Ariane Charpin respond to the gap identified in the literature by performing a retrospective analysis of a large and highly debated merger that took place in the French urban public transport industry. Specifically, they assess whether the consummated merger between two major transport groups, Veolia Transport and Transdev, in 2011 gave rise to merger efficiency gains.

The key challenge of performing a retrospective analysis is establishing a counterfactual that reflects, as closely as possible, how the market outcomes of transport networks affected by the merger would have evolved absent the merger. The authors exploit the industry setting to employ a difference-in-differences methodology evaluating the effect of the merger. They compare the evolutions of operating costs of net-

works operated by the merged companies (>treated< group) with similar networks operated by competing companies (>control< group).

Their results suggest an absence of efficiency gains attributable to the merger. Their study relies on the use of several control groups in order to control for the possibility that the networks operated by competitors of the merging parties have reacted to the merger and is robust to a great number of robustness checks. Their conclusion does not change even when considering the heterogeneity in the effect depending on identity of the merging party, the contract type in place or the closeness of competition between local operators.

Overall, their study contributes to a growing number of case studies undertaken by economists that can help determine whether horizontal merger policy is being properly enforced.



iStock: chris-mueller

The full paper >Merger Efficiency Gains: Evidence from a Large Transport Merger in France< is available as *DIW Discussion Paper* No. 1843.

BCCP Newsletter 5/2020 COMPETITION IN MARKETS COMPETITION IN MARKETS BCCP Newsletter 5/2020

# We Value Your Privacy: Behavior-Based Pricing Under Endogenous Privacy

In an age of Big Data and large-scale information acquisition, the EU General Data Protection Regulation (GDPR) reinforced protection of private information and the data sovereignty of European citizens. While this is primarily supposed to protect personal information, it may also impact the functioning and dynamics of markets. In particular, in web-based markets, sellers may access a wide range of customer information prior to purchases through the use of cookies. Due to the GDPR, consumers can now influence how and when their data is collected.



iStock: ipopba

In an early attempt to grasp such economic implications of this policy, BCCP Doctoral Students Friederike Heiny, Tianchi Li, and Michel Tolksdorf construct a theoretical model that is subsequently tested in an economic experiment. The experiment studies the impact of deliberate privacy decisions in a competitive market of firms that gather and use shopping data information in two subsequent periods. They compare two benchmark scenarios: when buyers disclose their first period purchasing information in the second period, either all sellers have access to information for all customers or sellers only have access to information for their own past customers.

Rationally, buyers should fully disclose their information given every seller can access it, since this increases competitive forces and drives prices downwards. If sellers cannot access the information of their competitors, rational buyers will refrain from disclosing any information, even though they would collectively benefit from disclosing all information.

The authors bring their theory to a laboratory environment and observe student's privacy choices in an abstract market setting that corresponds to their theoretical framework by considering a case with information sharing between sellers and a case without. They link market decisions to an instrumental measure of priva-

cy concern that finds wide application in marketing research. This instrument is a survey, covering control, collection, and awareness issues concerning the inquiry of private information.

The willingness to share shopping data is lower for those participants who are generally more concerned about their private information when the data is not shared between sellers. This corresponds to their theoretical finding of tensions between individual and collective benefits when sellers hold shopping data exclusively. This effect does not occur when information is non-exclusive.

The full paper >We Value Your Privacy: Behavior-Based Pricing Under Endogenous Privacy< is available as SSRN Working Paper.

# Only one Room Left! How Scarcity Cues affect Booking Intentions on Hospitality Platforms

It is one of the oldest tricks in the book. While looking for accommodation on platforms such as Booking.com or Expedia, consumers are likely to encounter messages telling them that <code>>all</code> but one room have sold out, or that a specific item has been <code>>booked</code> over <code>78</code> times within the last <code>24</code> hours. Of course, most people are perfectly aware of the fact that this cannot actually be true (... or can it?). If not in panic mode yet, the website will go on to tell that <code>-</code> at this very moment <code>-</code> <code>143</code> other people are looking for rooms too. It will even show other hotels just to add that those have just sold out. Such communication of scarcity has emerged as a widely-used marketing principle in electronic commerce, especially on hospitality platforms.

it's-gone effect) and value (the must-be-good effect). Although many consumers dismiss such coercive digital sales practices as unbelievable, they are still quite effective in triggering booking decisions. The present paper provides explanations for why and how this is.

The full paper >Only one room left! How scarcity can affect booking intentions on hospitality platforms is published in *Electronic Commerce Research and Applications, Volume 39* (January-February), 2020, pp. I-II.



iStock: Rex\_Wholster

In this recently published article, BCCP Fellow Timm Teubner and co-author Antje Graul investigate the effect of scarcity cues on consumer behavior. Using data from Airbnb and Booking. com, they show that scarcity cues are used differently by hotel versus peer-based hospitality platforms. They then conduct an online experiment of consumer perceptions of scarcity, finding support for two distinct effects, with scarcity perceptions leading to increased booking rates through urgency (the get-it-before-

# The Benefit of the Doubt: Willful Ignorance and Altruistic Punishment

A majority of people are willing to punish others for violating certain social norms. The willingness to punish norm violations has been suggested as being a major enforcement mechanism of social norms, which, in turn, are seen not just as key drivers of cooperation between strangers, but also the existence of human societies more generally. However, the motives behind people's willingness to altruistically punish are not fully explored: it is not clear why people engage in altruistic punishment. In this recently published article, BCCP Doctoral Student Robert Stüber analyzes whether the willingness to punish norm violations is reduced when people can remain willfully ignorant about whether a norm violation has taken place.

In order to answer his research question, he conducted a laboratory experiment that modifies the workhorse design for studying altruistic punishment: One participant (called the >dictator<) divides a certain amount of money between himself and a passive >recipient.< The dictator can be selfish (and keep most of the money for himself), thereby violating a certain distributional norm, or he can be fair (and give a substantial part to the recipient). After the decision of the dictator, a third party is immediately informed about the dictator's choice and then decides whether she wants to punish the dictator, which is costly and means that the dictator's income is reduced, or not, such that the dictator's income remains unchanged. In the new study, the researcher keeps all these elements constant, but the third parties are no longer immediately informed about the choice of the dictator, but can, without any costs, choose to reveal the choice by clicking on a button. Irrespective of whether a third party reveals the choice of the dictator, she can decide whether to punish the dictator.

The results show that more than one-third of the third parties willfully ignore the information about whether a norm violation has taken place. Because almost all of the ignorant third parties choose not to punish the dictator, the fraction of altruistically punished norm violations substantially decreases by 50% to about one-third.

In the second part of the study, the author shows that this willful ignorance is in line with the social norms that prevail with respect to altruistic punishment: Although it is socially appropriate to reveal the information about the choice of the dictator, if one remains ignorant, it is very socially inappropriate to punish. At the same time, it is considered to be okay to remain ignorant and not to punish.



iStock: RapidEye

These findings suggest that by remaining willfully ignorant, people can maintain a high self-image (because they >do not know about the norm violation) and simultaneously avoid the costs of engaging in altruistic punishment. They act in line with the prevailing social norms in situations of initial ignorance. Hence, existing studies overstate the role of altruistic punishment because, in a more realistic scenario that allows to avoid learning about norm violations, a substantial fraction of norm violations remain unpunished. Beyond that, the results suggest that the willingness to punish norm violations is often driven by a desire to maintain a high self-image and to act in accordance with the prevailing social norms.

The full paper >The Benefit of the Doubt: Willful Ignorance and Altruistic Punishment is forthcoming in *Experimental Economics*.

# Earn More Tomorrow: Overconfidence, Income Expectations, and Consumer Indebtedness

Overborrowing is a problem in many advanced economies. According to the OECD, between 5 and 10 percent of households are regarded as overindebted. Too much debt is not just problematic for individual households, but it can also have negative consequences for the economy as a whole. Nevertheless, the reasons for consumer overborrowing are not well understood.



iStock: Zhonghui Bao

According to neoclassical economic theory, overindebtedness should only occur as a result of economic shocks that exceed the shock absorbing capacity of a household, such as unemployment, divorce, or death of a family member. However, this does not explain the high level of overindebtedness observed in some countries. One possible contributing factor is overconfident income expectations: if people expect their income to rise in the future, they may overconsume early in life, thus accumulating too much debt, even without experiencing economic shocks.

In this recent working paper, BCCP Fellow Antonia Grohmann, BCCP Senior Fellow Lukas Menkhoff, and BCCP Doctoral Student Renke Schmacker, together with their co-author Christoph Merkle, perform a lab experiment to study the impact of overconfident income expectations on borrowing decisions. In the experiment, subjects can earn money by outperforming others in a general knowledge quiz. Income expectations are exogenously manipulated by priming subjects with hard and easy quiz questions. Before income is realized, subjects can purchase products on loan. The results show that subjects with higher income expectations are more likely to take out debt than participants with low income expectations. The authors provide additional survey evidence for a link between overconfidence and debt taking using the innovation sample of the GSOEP.

The full paper >Earn More Tomorrow: Overconfident Income Expectations and Consumer Indebtedness is available as *CRC TRR* 190 Discussion Paper No. 152.

## Don't Expect Too Much – High Income Expectations and Over-Indebtedness

Consumer over-indebtedness is a growing problem globally. The economic and social consequences are not only severe for consumers, but a large number of over-indebted households can also threaten the financial stability of an entire economy. Yet, the determinants of over-indebtedness are still not well understood. In this recent study, BCCP Doctoral Student Melanie Koch and her co-authors Theres Klühs and Wiebke Stein investigate the role of high income expectations for household over-indebtedness. They conduct an extensive survey analysis among rural households in Northeastern Thailand, which are part of a larger panel study. Among emerging markets, Thailand has the highest debt-to-GDP ratio in the world. In rural Thailand, around three-quarters of the households have at

least one outstanding loan, while every fifth household can be regarded as over-indebted.

The survey focuses on household finances, including savings, loans, objective and subjective over-indebtedness indicators, as well as income expectations. It is complemented with a lab-in-the-field experiment, in which respondents make a consumption decision based on a mere payoff expectation that is varied exogenously. The results show that households with high income expectations are significantly more over-indebted than households with rather neutral or negative expectations. Additionally, households that are very certain about their future in-

come realization are also more over-indebted. The analysis controls for important factors supposedly affecting over-indebtedness, like current income and experienced income shocks. Results from the experiment support the empirical relationship between (too) high expectations and overspending. Moreover, those who are over-indebted in real life are also those who overspend in the lab.

Low income households are especially at risk to become over-indebted as they are, in general, more vulnerable to income shocks. They often face immense income uncertainty. Expectation formation is especially difficult in uncertain environments, where income depends, for example, on future harvests or the extension of employment contracts. This uncertainty can lead to overoptimistic expectations and, subsequently, excessive loan take-up. Still, this is not purely a demand-side problem as excessive borrowing is clearly promoted if credits are granted without sufficient screening, which is exactly the case in rural Thailand. Moreover, even in countries like Germany, where difficulties to repay loans are on the rise, a similar pattern is observable. Increasingly, consumer credit is not just offered by conventional banks and creditworthiness checks are less detailed than before. Income uncertainty is often not taken into account, especially not by firms offering loans online.

Unforeseen crises, like the Corona pandemic, highlight the potential negative consequences of high income expectations and overoptimistic borrowing. Those who have too much credit right now, potentially caused by high income expectations, are at a greater risk of becoming trapped in over-indebtedness.

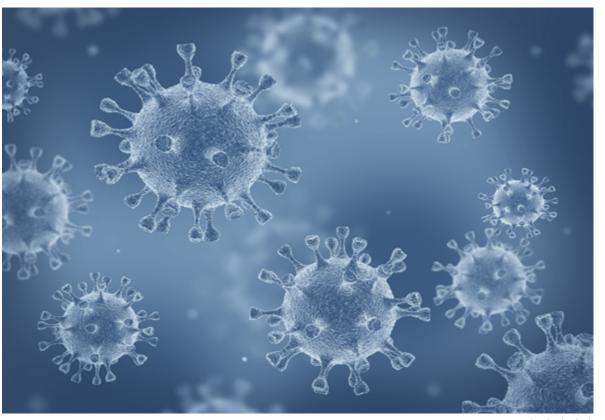


iStock: Rawpixel

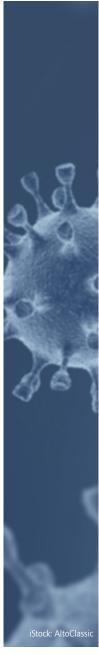
The full paper >Don't Expect Too Much – High Income Expectations and Over-Indebtedness« is available as *CRC TRR 190 Discussion Paper* No. 200. The full DIW Weekly Report is available in German.

### **BSE Insights on the Corona Crisis**

All texts were written as part of the new BSE Insights on the Corona Crisis series in which researchers of the Berlin School of Economics provide short texts with scientific content that is relevant for the crisis.



iStock: AltoClassic



### A Prime Example of Policy Uncertainty

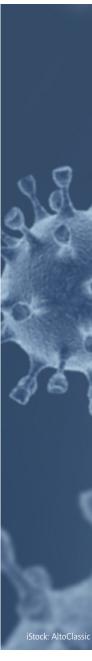
#### By BCCP Senior Fellow Georg Weizsäcker

Many of the economic and societal impacts of SARS-CoV-2 are connected to a single policy measure: the >shutdown< that enforces social distancing, including major steps like school closures, curfews and travel restrictions. The shutdown reduces the speed of economic decision making significantly. In particular, since most economic decisions are forward-looking, many of them are currently delayed by the fact that we lack an answer to a simple question: when will the governments lift the restrictions? Like the shutdown itself, the answer to this question lies in the hands of the governments. The current uncertainty about the impact of the virus is, therefore, an example of policy uncertainty. If households and firms were able to predict the shutdown's ending date - independent of when it is - then everyone would be better off. All economic agents could return to scheduling meetings, booking tickets, training for tests and competitions, building inventories, etc.; no more future planning would go to waste.

Answering the question about the timing is, however, difficult and politically costly – one may therefore naturally ask how beneficial it is, quantitatively, to reduce the policy uncertainty. This relates to a strand of the academic literature, on measuring the negative effects of volatility and uncertainty. Papers in this tradition usually make a set of structural assumptions (e.g., expected utility with constant relative risk aversion) and ask how the welfare of economic agents would increase in a counterfactual world where all uncertainty is gone. A remarkable paper asks this question for social security policy, with minimal assumptions: Luttmer and Samwick (2018) conduct a survey among a representative sample of the U.S. population and elicit the respondents' beliefs about their personal social security benefits, including questions about the subjective probability distribution of receiving the benefits. They also ask the respondents about their preference for a (hypothetical) guaranteed benefit. These data allow calculating a risk premium for each respondent: how much of the social security entitlement would a person be willing to give up if the entitlement came with certainty? It is very intuitive that in such a hypothetical case of certainty, long-term financial planning would

be easier. The answer, depending on the precise calculations in the paper, is that the risk premium is about 5-12% of the overall benefit entitlement. A substantial amount!

What can we transfer from this very different policy context to the policy uncertainty in the present crisis? Clearly, one has to be very careful about extrapolating quantitative insights. But it is no small insight that the Luttmer/Samwick paper shows that policy uncertainty can be substantial, measured as a fraction of what is at stake. Also, one can adapt the method of Luttmer/Samwick for an analogous thought experiment: how much would economic agents be willing to pay for a perfect prediction of the shutdown's ending date? Given how important the policy is, it is likely that the answer to this thought experiment about the policy's end would also be substantial. The governments, of course, cannot erase the uncertainty about the shutdown's ending date completely. But if they could make the decision better predictable, e.g., by announcing a set of objective criteria for their decisions, then prediction markets and other sophisticated tools would likely allow many economic actors to fare better.



#### **Euro Bonds and Moral Hazard**

#### By BCCP Fellow Zarko Kalamov

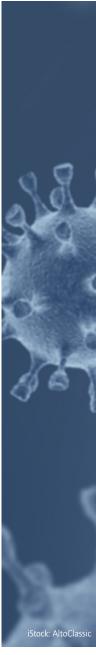
The coronavirus pandemic and subsequent lockdown measures have hit many economic sectors and brought about the need for strong fiscal stimulus. The governments of nine EU countries have already called for a common debt instrument to finance such stimulus. Common bonds, also called euro or corona bonds, should have long maturities and be a one-off measure. Because the bonds will be backed by all member states, they should have a high credit rating and low interest costs.

The idea of common bonds is not new and was discussed by the European Commission already in 2011. However, common bonds are highly controversial, owing to the moral hazard problem they may create. As these bonds would be a substitute for national bonds at a different interest rate, it is feared that countries most likely to benefit from the interest differential will borrow too much after their implementation. Because common bonds do not yet exist, there is no empirical evidence to either support or disprove the moral hazard argument. However, the 2011 proposal of the European Commission has triggered theoretical research on the topic.

Beetsma and Mavromatis (2014) analyze common bond designs in a theoretical model of a union with core and peripheral countries. Beetsma and Mavromatis are interested in the moral hazard of debt mutualization: how does the introduction of common bonds affect the borrowing decision of the peripheral country. They identify a form of common bonds which lowers the debt of the peripheral country. This is the so-called common bond with a limited guarantee. Under this instrument, the core country provides a guarantee for a certain maximum amount of debt by the periphery. If, however, the periphery's debt exceeds this maximum amount, the joint liability vanishes completely, and the system returns to the situation without common bonds. The union welfare increases if, additionally, the guarantee is conditional on structural reforms. By analogy, corona bonds could be welfare-increasing if designed conditional on corona-related spending.

Kalamov and Staal (2016) also analyze the moral hazard of common bonds in a union with heterogeneous countries. In addition to studying the effects on public debt, this article analyzes how common bonds affect the conditions under which a bailout occurs. Kalamov and Staal consider common bonds with a guarantee up to a certain debt threshold. In contrast to the debt instrument considered by Beetsma and Mavromatis (2014), the guarantee of debt below the threshold does not vanish once the peripheral country's public debt surpasses a certain level. Thus, the joint liability is only rejected for debt exceeding the agreed-upon threshold. This type of common bond does indeed increase the peripheral country's borrowing. However, the costs of servicing the public debt decline. Owing to the lower debt costs for the peripheral country, it has less to gain by inducing a bailout. Therefore, the occurrence of a bailout becomes less likely, despite the periphery's higher public debt level. The reason is that bailouts are triggered by high debt servicing costs, not by high levels of debt per se.

These articles show that the fear of moral hazard associated with common bonds may not be justified. A carefully crafted one-off common debt instrument with some form of conditionality and/or limited guarantee may give the fiscal space to all member states to appropriately respond to the pandemic, by keeping the costs of financing the corona-related spending at low levels.



# The Importance of (Non-Selective) Testing for Understanding the SARS-CoV-2 Pandemic

#### By BCCP Doctoral Student Shan Huang

Every day, we are confronted with new numbers on SARS-CoV-2 infection cases. We eagerly use these numbers to analyze recent developments (>Social distancing appears to be working<) and draw policy conclusions by making cross-country comparisons (>Which country has flattened the curve<) and learning from the international experience (>Fatality rates – deaths per infection cases – are initially higher in countries with more intergenerational interactions<). By collecting and publishing case numbers, the Johns Hopkins Coronavirus Resource Center, like several other initiatives, has turned into an important resource for information on the spread of SARS-CoV-2. What these data fail to document is under which conditions patients are being tested for the virus.

The economics literature provides some insights into how patients are selected into medical testing. The structural assumption is that physicians try to allocate costly tests to those patients with the highest expected returns to testing. The value of a test result is determined by its potential to affect subsequent decisions. Typically, only a positive test result requires further interventions (e.g., medical treatments, quarantine). Therefore, patients with a higher probability of being tested positive have higher expected returns to testing. In this model, a physician first assesses a patient's probability of being tested positive and then, based on her assessment, decides whether to perform testing. Analogously, many countries have adopted the strategy to selectively test individuals only when they report symptoms associated with COVID-19.

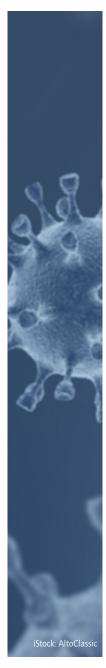
Abaluck et al. (2016) apply the selective testing model to examine heterogeneity in physicians' decisions to perform diagnostic imaging on US Medicare patients. Their study makes three observations. First, physicians' testing rates range widely from 1.7% to 8.2% of a physicians's patients. Second, physicians' testing rates are correlated negatively with their average test yields, defined as the probability of a positive result conditional on testing. While physicians attempt to maximize the number of diagnosed positive cases, they do so with

varying success. Physicians with a I percentage point higher test rate have a 0.39 percentage point lower test yield. Third, for several comorbidities present in risk scoring systems, patients are less likely to be tested, although their test yield is higher than for patients without those conditions.

The authors discuss multiple sources of underlying heterogeneity to explain these empirical observations: patient populations, testing thresholds, and diagnostic skills. Differences in physicians' patient populations affect the prevalence of a condition. These differences could explain the observed variation in test rates, but not the variation in test yields. For that, heterogeneity in physicians' testing thresholds is required. Physicians who apply relatively lower testing thresholds are willing to test patients with a lower expected probability of testing positive. These physicians might test more, but end up with lower average test yields. Lastly, the authors show that physicians may make systematic mistakes in assessing patients prior to testing decisions.

A key takeaway from this study is that selective testing makes it difficult to interpret variation in the number of positively tested SARS-CoV-2 infections. Without further information, differences in case numbers could reflect variation in prevalence just as well as different testing thresholds – driven by costs, capacity constraints, and preferences – or diagnostic skills. These elements might even vary over time: testing guidelines provided by the Robert Koch Institute change continually and we do not know how test yields are affected.

With this background, a planned study to test non-selectively for SARS-CoV-2 antibodies in a large random sample of the German population is an exciting development. Such a study will be key to understand how the pandemic evolves in Germany and to devise informed, effective policy options. For international comparisons, at a minimum information on testing criteria and test numbers is required to base meaningful interpretations on published infection case data.



#### **Health and Recessions**

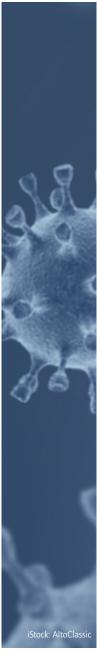
#### By BCCP Senior Fellow Peter Haan

The coronavirus pandemic and the related shutdown of the society and economy will lead to a severe recession in most countries. It is likely that unemployment will increase and that a sizable share of households will face a reduction in net household income and living standards. An additional concern of the economic downturn is related to health and mortality. Will the coming recession on average lead to negative health effects and an increase in mortality?

The previous empirical literature provides a clear answer to this question: overall health increases and mortality rates decrease during economic recessions. Ruhm (2016) reviews the existing evidence that in most OECD countries, including the US, France, Germany, Spain or Canada, an increase in the unemployment rate has positive side effects on health and life expectancy. These analyses exploit variation in unemployment rates between different regions within one country, which allows to control for time-specific effects related to health and mortality such as medical progress. In his paper, Ruhm makes an additional empirical point that is very relevant for the expected health effects of the corona recession. He shows that the positive health and life expectancy effects are also present in severe recessions, for example in the recession after the financial crises of 2007-2009.

Importantly, recessions have opposing effects on different health outcomes. There is evidence that physical health improves but mental health deteriorates during recessions. Specifically, suicide rates increase while the positive effects on health and life expectancy are mainly related to a reduction of motor vehicle accidents and air pollution. This suggests that the health and mortality effects are heterogeneous. While we can expect on average positive effects on health, for certain groups recessions will have adverse health effects and negative effects on life expectancy. Since the empirical studies are in general based on macro data on the regional level, there exists no robust evidence about group specific effects on the micro level, for example by education or income. More research and better data is required to provide evidence for the different subgroups.

Obviously, the consequences of the corona crisis and the coming recession might be different from the previous experience. This crisis not only affects the economy but social life much more generally, especially during the shutdown. The travel restrictions currently in place might reinforce the positive effects related to pollution and traffic. At the same time, negative consequences for mental health may be much more pronounced. Therefore, it is important that policy makers discuss the concerns related to mental health in public and support measures to improve mental health.



#### **Lotteries over Time**

#### By BCCP Senior Fellow Georg Weizsäcker

On March 4, the film studios MGM and Universal announced the postponement of the new James Bond film's release (>No Time To Die<) from April to November 2020. At the time of the announcement, Chinese movie theaters had already closed, but little else was known about the SARS-CoV-2 restrictions worldwide. Pushing the date so far back seemed a rather cautious move — but the film producers faced a difficult choice: had they re-scheduled the release to an earlier date, e.g., in July 2020, they would stand to gain an earlier stream of revenues if the shutdown is over in July. If it is not over, however, another re-scheduling would become necessary. In this case, it would likely be too late for a release in November — release date scheduling is complex — and the producers would have to delay until an even later date. In essence, they made a choice between a safe-but-late option and an early-but-risky option.

The reader will recognize this trade-off, as many economic agents now face similar problems during the shutdown. The timing of access to markets is uncertain, which impedes all scheduling. When can a conference, or trade fair, take place? When does a training program start? When are delivery chains and product demand strong enough for production facilities to plan a ramp-up? In each case, planning for a too-early re-invigoration runs the risk of having to postpone even more than what would be possible with more prudent planning.

This highlights the importance of the agents' risk attitudes with respect to time. Do they like or dislike uncertainty in the timing of things, and what is their willingness to pay for avoiding it? The bulk of the literature on choice under uncertainty takes timing as given and discusses randomness in the size of earnings, or other outcomes. In the present discussion, we hold the size of the outcome constant, and ask about the willingness to accept risks in the time of obtaining it. The literature on this issue is very small, but two recent papers by DeJarnette et al. (2019) and Ebert (2019) give a very good introduction, and make a clear theoretical prediction.

Perhaps the reader wants to pause here, and make a guess?

The theoretical prediction is that under expected discounted utility, which is the standard model of economic decision making over time, economic agents are risk seeking: they prefer adding uncertainty about the time of receiving a good. For many of us, this is a surprising and unintuitive result. Yet, as DeJarnette et al. (2019) and Ebert (2019) show, it is a very general result and holds under a wide variety of preference assumptions. The logic is simple: if discounting is convex over time – e.g., a constant discount factor is multiplied for every period of delay – then a time-risky reward has a larger expectation of the reward's discounted value than if the same reward were to arrive at the average time for sure. This is the math – to get an intuition, think of someone with a nagging impatience who desperately wants to receive a good now: she is willing to take risks in arrival time if they satisfy her impatience with sufficient likelihood. If receiving the good now is all that counts, then even a decent probability of receiving it now is better than receiving the good a little later for sure. This logic extends to the much more general result.

What economic insights follow from this discussion, for the current shutdown? First, we need to be aware that the theoretical result may be empirically false, as is also suggested by the first controlled experiments: real people appear to be risk averse with respect to time (see DeJarnette et al, 2019). Additional empirical assessments would be important here. Second, both risk seeking and risk averse behaviors will likely have negative externalities for the economy. Taking large scheduling risks now may induce repeated re-scheduling and thereby destroy more economic value. (For instance, movie theater owners may rely on the release date.) Conversely, delaying things too far would also slow the economy down. From a societal perspective, taking the externalities into account, it seems preferable to avoid both effects and reduce the uncertainty about the shutdown's duration as far as is reasonably possible.



# The Emission Drop Due to COVID-19 Does not Substitute for Climate Policy

#### By BCCP Fellow Aleksandar Zaklan

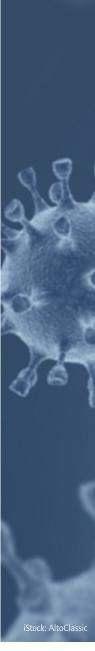
The measures taken by governments worldwide to slow the spread of COVID-19 have led to a drop in economic activity, with a corresponding decrease in greenhouse gas (GHG) emissions. Industrial facilities in many countries are shut down or produce far below their potential; road and air traffic have slowed due to restrictions on commercial and personal travel. As a result of the severe contraction in economic activity, less fossil fuel is used in electricity generation and transportation, while industrial facilities generate fewer process-related emissions. Unless it is quickly reversed, this decline in economic activity may lead to the first drop in annual global GHG emissions since 2008/2009, the start of the last financial and economic crisis.

However, as soon as output picks up again, emissions are likely to recover quickly, as happened in 2008/2009. The challenge of containing the increase in average global temperatures to 2 or better 1.5 degrees centigrade, as agreed to under the Paris Agreement, remains largely unchanged. Zaklan et al. (2020) examine sectors covered by the EU's Emissions Trading System (EU ETS) – which represent about one half of European GHG emissions – and find that the minimum contribution in line with European commitments under the Paris Agreement requires almost doubling the speed of decarbonization during this decade. Delays in further abatement action will require an increasingly drastic transition from a Paris-inconsistent to a Paris-consistent policy framework and will further escalate policy uncertainty for affected firms.

Acemoglu et al. (2012) analyze how a permanent decarbonization may be accomplished in a model of green growth with directed technical change. They formulate an endogenous growth model, in which output can be produced using "clean" (low-emission) or >dirty< (high-emission) technology. The substitutability of output based on each technology depends on a substitution parameter. For example, in the case of electricity, the rate of substitution is high, as power may be produced equally well by fossil-fueled plants or from

renewable energy. The dirty technology starts with a productivity advantage due to its larger installed base. Innovation improves the productivity of each technology, and profit-maximizing researchers pursue innovation. The more R&D is invested in improving one type of technology, the more effective innovation becomes in the future. Acemoglu et al. (2012) show that without government intervention the clean technology may never overcome the initial productivity advantage of the dirty technology. However, with the right policy mix, producing output using the clean technology can drive out production using the dirty technology. Optimally, intervention takes two forms: First, output using the dirty technology is taxed, for example through carbon pricing. Second, innovation in the clean technology is incentivized through R&D support for the clean technology.

Implementation of such a two-pronged policy approach has its challenges in practice. Government resources will likely be stretched thin after an extended period of keeping the economy afloat during the COVID-19 crisis. Therefore, introducing new carbon pricing measures or increasing the stringency of existing ones during or after the COVID-19 pandemic may be politically difficult. Moreover, with limited fiscal resources in the aftermath of the COVID-19 crisis governments may be under pressure to focus on supporting existing businesses instead of helping develop new ones through R&D policy. The increased severity of this trade-off during and after the COVID-19 crisis may slow the development of low-carbon technology. However, committing to both elements of this strategy is important to ensure the effectiveness of climate policy, even during times of limited resources. Green growth policies, for example supporting the development of renewable energy or electric vehicles, in combination with pricing GHG emissions will jointly aid the post-COVID-19 economic recovery and better align the structure of the economy with long-term emission sustainability.



# Will COVID-19 set the Stage for New Mergers in the Digital World? Time for Antitrust Authorities to Lend Special Attention to the Role of Data

#### By BCCP Doctoral Student Maximilian Schäfer

There is little doubt that the consequences of the lockdown induced by the Covid-19 pandemic would have been magnified in the absence of digital technologies. Given the value they create, it is no surprise that digital platforms stand to gain from the current situation. One remarkable example is the rise of Zoom, a video-conferencing service. Unknown to the general public at the end of 2019, Zoom experienced a twenty-fold increase in its user base over the next three months, reaching approximately 200 million daily users in March 2020. Its ease of use and mostly free-of-charge service has made Zoom the preferred choice for companies, institutions, and private users alike.

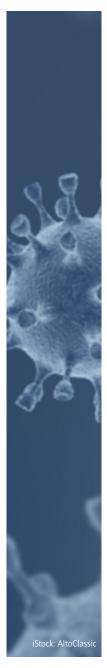
Its impressive user growth conferred Zoom significant network effects, a term coined by economists to describe the benefits individual consumers enjoy from tapping into a large user base. Network effects can make it hard for potential competitors to dislodge Zoom. Users will think twice before switching to a competing video conferencing service that few colleagues or business partners use.

In addition to such network effects, the sudden increase in usage intensity guarantees Zoom ample amounts of what is probably the most valuable currency in the digital era: user-specific data. The empirical work of Schaefer and Sapi (2019) suggests that the network effect and the effect of intensified data collection can reinforce each other: in digital services, users do not just derive utility from a large customer base but also from service quality. For example, in virtual meetings, users care about audio and video quality, smooth functioning of large-scale events, security, and many more features. Having a diverse set of users and types of virtual meetings provides valuable opportunities to experiment with new features, observe user behavior, and collect user feedback at large scale. Many quality improvements rely crucially on combining large amounts of data collected from a broad set of customers. The resulting synergies of network effects and intensified data collection, which Schaefer and

Sapi (2019) coin as >data network effects,< are likely to attract the attention of Silicon Valley tech giants. Potential future acquisitions of Zoom may aim to internalize and amplify these data network effects by integrating Zoom into existing data-driven business models.

In the scenario of a merger, antitrust authorities may confront the claim that potential anticompetitive effects resulting from acquiring Zoom's data and customer base will be marginal. Standard arguments to defend this conjecture usually do not acknowledge the potential of a self-reinforcing effect between the size of the customer base and the intensity of user-specific data collection. This omission is likely to lead to an under appreciation of the true value of data and, consequently, its potential for anticompetitive effects.

The example of Skype (acquired by Microsoft in 2011), whose sluggish innovation was exposed by Zoom, highlights only one side of the negative aspects of mergers. By allowing the tech giants to enlarge themselves, we do not only risk foregoing the innovative potential of the acquired firms, we also face the bigger risk that we reduce the likelihood of competitors to expose the potential sluggishness in innovation in the core business areas of Silicon Valley's dominant firms. Allowing them to acquire databases is likely to help big tech companies protect themselves from competitors - potentially much more than we initially conceive. The corona pandemic has likely set the stage for new high profile acquisitions in Silicon Valley, it remains to be seen how antitrust will react this time.



### **Expectations and COVID-19 Policy Announcements**

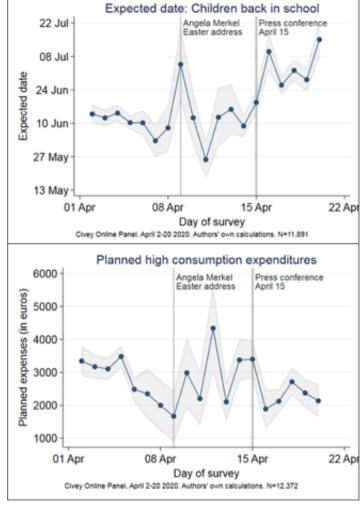
By BCCP Senior Fellows Peter Haan and Georg Weizäcker and co-authors Andreas Peichl, Annekatrin Schrenker, and Joachim Winter

Are we still in lockdown? How long will it last? At the present stage – late April, 2020 – the increasingly differentiated set of policy measures makes it harder and harder to give a concise answer to these questions. Every day, new policies target finer and finer pockets of economic and social life. Expectations about future policy responses to Covid-19 are becoming highly differentiated, too, as they relate to the new variety of issues. This not only generates new challenges for economic agents but also for the expectation management that policymakers engage in. As a vast sea of analyses and opinions on all kinds of policies becomes available, communicating about the policies turns into a cacophony. Are policymakers able to receive the public's attention in the middle of this cacophony?

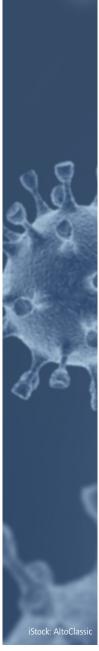
In a new discussion paper, Haan et al. (2020), we find evidence that at least until recently, the answer is affirmative. The general population in Germany indeed listens to Germany's policy makers. In order to measure the movements of expectations with enough time precision, we conducted a daily online survey of expectations held by a wide sample of people living in Germany. The respondents report their forecasts about the lifting of restrictions of public life, especially school openings and large public events. We also ask about planned non-routine consumption expenditures. Our data analysis covers a time period during which Chancellor Angela Merkel made two widely broadcasted public appearances. The reported expectations suggest that Merkel's statements have a strong effect on the public, especially in an appearance that she made after her meeting with the German 'Länder' prime ministers on April 15, 2020. In this meeting, Merkel and the prime ministers sent a rather cautionary message (>zerbrechlicher Zwischenerfolg<). Immediately after the appearance, expectations about school openings became significantly more pessimistic and the households' planned consumption expenditures fell sharply. The figure illustrates the evolution of the average of reported expectations about the date when the majority of school children is back in the classroom (left panel) and the evolution of the amount of non-routine expenditures that are planned in the next three months (right panel). Merkel's public appearance on April 15 is marked

by the second of the two vertical lines in each panel. Both time series indicate a dampening of expectations after Merkel's statements.

Note, however, that an earlier statement by Angela Merkel, her Easter Address to the German population on 9 April, 2020, appears to have had the opposite effect. There, she showed more optimism and, subsequently, the time series we recorded become more optimistic, too, at least for a few days. Overall, the statements made by Angela Merkel appear to affect the German public's views quite strongly.



40



#### References

Abaluck, J., L. Agha, C. Kabrhel, A. Raja, and A. Venkatesh (2016): The Determinants of Productivity in Medical Testing: Intensity and Allocation of Care. *American Economic Review*, 106(12), 3730-3764.

Acemoglu, D., P. Aghion, L. Bursztyn, and D. Hemous (2012): The Environment and Directed Technical Change. American Economic Review, 102(1), 131-166.

Beetsma, R. and K. Mavromatis (2014): An analysis of Eurobonds., *Journal of International Money and Finance*, 45, 91-111.

DeJarnette, P., D. Dillenberger, D. Gottlieb and P. Ortoleva (2019): >Time Lotteries and Stochastic Impatience.<, *Econometrica*, forthcoming.

Ebert, S. (2019): Decision-Making When Things are Only a Matter of Time<, *Operations Research*, forthcoming

Haan, P., A. Peichl, A. Schrenker, G. Weizsäcker, and J. Winter (2020): >Starke Erwartungsreaktionen auf Angela Merkels Covid-Erklärungen. CRC TRR 190 Discussion Paper No. 239 (Also appeared as ifo Schnelldienst Digital 5/2020 and DIW Discussion Paper 1865/2020.).

Kalamov, Z. and K. Staal (2016): Public debt, bailouts, and common bonds. (International Tax and Public Finance, 23, 670-692.

Luttmer, E. F. P. and A. A. Samwick (2018): The Welfare Cost of Perceived Policy Uncertainty: Evidence from Social Security. *American Economic Review*, 108(2), 275-307.

Ruhm, C. (2016): >Health Effects of Economic Crises.< Health Economics, 25(S2), 6-24.

Schaefer, M. and G. Sapi (2019): Data Network Effects: The Example of Internet Search. *Mimeographed*.

Zaklan, A., J. Wachsmuth, and V. Duscha (2020): >EU ETS up to 2030: Adjusting the Cap in Light of the IPCC1.5°C. Special Report and the Paris Agreement. Umweltbundesamt Climate Change 07/2020.

BCCP Newsletter 5/2020

### Special Panel Session of the Virtual Digital Economy Seminar on Merger Policy in Digital Markets

On May 14, 2020, BCCP co-organized a special panel session of the Virtual Digital Economy Seminar on merger policy in digital markets. Luis Cabral (New York University), Fiona Scott-Morton (Yale University), and Tommaso Valletti (Imperial College London) presented their views on, and ideas for, tackling current challenges of merger policy in digital markets. Their presentations were followed by a lively discussion between the speakers moderated by BCCP Spokesperson Tomaso Duso (DIW Berlin and Technische Universität Berlin).



Panelists Luis Cabral (New York University), Fiona Scott Morton (Yale University), and Tommaso Valletti (Imperial College London) and moderator Tomaso Duso (DIW Berlin and Technische Universität Berlin)
Photo: DIW Berlin/VIDE Seminar

There are increasing concerns about the rise of concentration, rising margins, and market power across sectors and countries over the past few years. These concerns are particularly strong in markets dominated by multi-sided digital platforms, because of their natural tendency to reach a concentrated market structure, mostly due to very strong network effects. Mergers and, in particular, acquisitions might have exacerbated such tendencies. Indeed, the five tech giants GAFAM - Google, Amazon, Facebook, Apple, and Microsoft – have been acquiring hundreds of companies over the past decades. The targets tend to be small and very young start-ups, often providing complementary functionalities or services to those of the acquiring incumbent platform. While the integration of these products into a well-functioning and established platform's ecosystem can be very efficient, there is also the concerns that these acquisitions can >kill< competition – be it actual or potential – and innovation in the market.

All panelists agreed that market power in digital markets is worrisome. According to Fiona Scott Morton and Tommaso Valletti, mergers can further increase market power and potentially directly harm consumers by killing potential competition and reducing both innovation and quality. In addition, these mergers can also cause indirect harm by increasing prices on the other side(s) of the market (for example advertising). Instead, Luis Cabral thinks that mergers in digital markets might mostly be beneficial for innovation: As it is difficult to protect intellectual property in digital markets, acquisitions are a good way of transmitting technology. Furthermore, synergies and complementarities are important in these markets and the prospect of being acquired provides a strong incentive for innovation. While Fiona Scott Morton agreed that many of these mergers lead to synergies that benefit consumers, she also highlighted that, in some cases, the harms likely outweigh the benefits and that our current system does not allow for balancing these harms.

BCCP Newsletter 5/2020
BCCP Newsletter 5/2020

There was some disagreement between the panelists regarding current merger enforcement. While Fiona Scott Morton and Tommaso Valletti think that there is too little merger control enforcement in Tech and that small entrants that could develop into competitors in the future should be better protected, Luis Cabral is concerned that too strong merger enforcement might negatively affect the incentives to innovate.

All panelists agreed that uncertainty in digital markets is larger than in traditional markets and that the law tends not to be able to cope with uncertainty very well. Moreover, there is a sense that antitrust authorities lack resources (financial, personnel, access to data) and – at least in the US – political will to go against tech giants. This calls for a calibration of laws and regulations, with all panelists agreeing on the need for a regulatory approach to digital markets. However, the views on how this could be implemented diverge. Fiona Scott Morton proposed, as one policy option together with other reforms, to consider reversing the burden of proof in merger proceedings, at least for dominant firms. Tommaso Valletti proposed a rebuttable structural presumption: a merger ban for very dominant platforms unless they can prove merger-specific efficiencies that benefit consumers. Luis Cabral disagreed and embraced the suggestion to increase the fees for notified mergers in order to increase the resources available to antitrust authorities, but then not to more vigorously enforce merger policy to avoid Type I errors. He rather proposed to use more ex-post remedies targeted to punish potential abuses of dominant position as well as regulation.

All agreed that it is important to use the momentum to perform some legislative reform and start thinking about the broader picture, recognizing that competition policy, consumer protection, and data protection should be better integrated in a more general framework.

A full recording of the panel is available on YouTube.

BCCP newsletters aim at presenting and discussing in accessible terms the main findings of scientific papers recently published by BCCP Fellows. Most of the news published in this issue can also be found on the BCCP website (http://www.bccp-berlin.de/news).

#### **About BCCP**

The Berlin Centre for Consumer Policies (BCCP) is a Leibniz ScienceCampus, established September 2015, and co-funded by the German Leibniz Association and its member institutions. Leibniz ScienceCampuses promote cooperation between Leibniz institutions and universities via regional, thematic research and policy partnerships.

The Centre builds on the cooperation between two Leibniz institutes – the German Institute for Economic Research (DIW Berlin) and the Berlin Social Science Center (WZB) – and faculties of the Humboldt-Universität zu Berlin, Technische Universität Berlin, the European School of Management and Technology (ESMT Berlin), the Hertie School, and the Alexander von Humboldt Institute for Internet and Society (HIIG).

A strong focus on Behavioral Economics, Industrial Organization, as well as Consumer and Competition Law - all combined with established policy expertise - makes Berlin an ideal location for a ScienceCampus focusing on consumer policies.

BCCP reinforces and institutionalizes this exceptional environment to create an enduring international platform in the broad area of competition and consumer policies. This platform strengthens the academic environment, encourages interdisciplinary research, and increases the visibility of Berlin as a center of excellent academic research and evidence-informed policy advice.

### Imprint

Organisation and Address German Institute for Economic Research (DIW Berlin) Mohrenstraße 58 10117 Berlin Phone +49-30-897 89-0 Fax +49-30-897 89-200 www.diw.de

Executive Board
Prof. Marcel Fratzscher (Ph.D., President)
Prof. Dr. Stefan Liebig (Executive Board Member)
Angelica E. Röhr (Managing Director)

Registration Court Local Court Berlin-Charlottenburg Association Register Number 95 VR 136 NZ Value Added Tax Identification Number DE 136622485

Responsible Person (according to German law §7 TMG) Prof. Dr. Tomaso Duso German Institute for Economic Research (DIW Berlin) Mohrenstraße 58 10117 Berlin