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BERLIN CENTRE FOR CONSUMER POLICIES

BCCP Newsletter

Research results for policy

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Dear readers,

Welcome to the seventh issue of the BCCP Newsletter.

In this newsletter, we focus on core topics of the BCCP research agenda: the assessment of competition and competition policy, the consequences of digitization, as well as behaviors in markets.

We start with research providing new evidence that concentration, correctly measured at the level of relevant antitrust markets, is rising in Europe and showing that entry barriers, a source of market power, are the main correlate. Next, we turn to the design of competition policy and show that, in an experimental setting allowing for free communication, a cartel leniency rule does not significantly affect cartelization, pricing, or communication. We further theoretically investigate how digital markets become monopolies and identify those characteristics facilitating market tipping that policy makers should look at (such as network effects, free service, single-homing, high switching costs). This research is closely related to this year's BCCP Online Panel, in which our distinguished speakers had a lively discussion about the Digital Markets Act, the EU legislative proposal to regulate digital markets in order to prevent abuses of market power. You will read a review of this exciting event.

Digitization permeates our society, with consequences in several domains. We report on an experimental study that looks at whether online reputation is effective at engendering trust across platforms. We find that cross-platform signaling can engender trust if the contextual overlap between the source platform of reputation and the target context is large enough. Moreover, we propose a new algorithm – the continuous fairness algorithm – that enables a continuous interpolation between two contradictory fairness definitions, namely individual and group fairness.

Finally, we analyze behaviors in markets. We experimentally study how minimum wages and consumer preferences for the fair treatment of workers interact, showing that minimum wage regulation can crowd out intrinsic fairness concerns. In another laboratory experiment, we look at whether making inequality more salient affects people's tax compliance. The results show that merely knowing that people are being treated unequally can yield strong tax evasion. Lastly, we evaluate the impact of a five-week alcohol prohibition in South Africa in July 2020 on mortality due to unnatural causes, finding that the policy decreased the number of unnatural deaths by 14%.

We wish you an interesting reading during a possibly more relaxed and Covid19 free summer!

Tomaso Duso

BCCP speaker

Concentration in the EU: Where it is Increasing and Why

An increasing body of empirical evidence documents trends of rising concentration, profits, and markups in many industries around the world since the 1980s. Two major criticisms of these studies are that concentration and market shares are poorly measured at the national industry level and that firm level revenues are a poor indicator of product sales. Indeed, because of data limitations, almost all existing studies measure concentration based

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on industry classifications and/or on firm balance sheet data, mostly aggregated at the national level.

This is highly problematic. Industry classifications of products may be either too large or too small in an antitrust sense. They may be too large since they include products that may not be substitutes, thus potentially including suppliers, customers, and non-competitors. They may be too small if they do not include relevant substitutes. Like the product market dimension, the geographic dimension of national industry-level aggregates may also be either too large or too small. They may be too small if relevant markets are actually at a supra-national level, such as worldwide or other groups of countries, or they may be too large if markets are actually more local than national. Even using more disaggregated data, such as census data, at the regional level does not completely solve this problem as market definition often does not coincide with geographic boundaries.

In a recent study, BCCP Spokesperson Tomaso Duso, BCCP Fellows Pauline Affeldt and Joanna Piechucka, and their co-author Klaus Gugler, propose assessing the issue of concentration by using a completely different data source. They base their analysis on a novel dataset constructed by analyzing the merger control decisions of the European Commission. They collected information on almost the complete population of DG COMP merger decisions from 1990 to 2014, generating a dataset comprising 5,196 merger decisions. Since in each merger case potentially different markets – either in terms of products or in terms of geography – are affected, the final dataset contains 31,451 antitrust markets. Yet, because market shares are not always or fully reported, concentration measures can only be calculated for around two-thirds (over 20,000) product/geographic antitrust markets affected by over 2,000 mergers.

With this data at hand, the authors show that the concentration measures in these relevant antitrust markets are larger, by a factor of four to ten times, than what the literature documents so far. They also confirm that concentration has indeed increased over time, on average. However, they document that there is a great deal of heterogeneity across several dimensions. The extent of the geographic market as well as the broad sector of activity play a crucial role in this assessment.

Concentration appears to have increased more in broad worldwide markets than in more narrowly defined national markets. Moreover, concentration seems to have increased more in the service sectors than in manufacturing. Even within these broad sectors, they observe quite some heterogeneity across and within industries.

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The authors further identify important elements that correlate with these concentration measures. Most importantly, barriers to entry are unambiguously positively correlated with concentration, irrespective of time periods, sectors of activity, and geographical market dimension analyzed. Although strict past merger enforcement negatively correlates with concentration, it appears that this correlation was stronger in the 1995-2004 period than thereafter. The intangibility of investments displays a consistent positive correlation with concentration only for wider than national – EU and worldwide – services markets. In contrast, it is negatively correlated with concentration in national markets.

Their main conclusion is that a strict merger and, more generally, competition policy enforcement that reduces barriers to entry are key tools to keep markets open and competitive. However, tearing down barriers to entry is not the sole task of antitrust authorities. Other policy areas such as regulation, institutions setting norms and standards, as well as international cooperation agreements must contribute. Notwithstanding this conclusion, there are circumstances in certain antitrust markets – such as high intangible asset industries in geographically wide services markets – where increasing concentration may indeed be likely related to increasing efficiency. It is the task of antitrust authorities to strike the delicate balance between these forces.

The full paper »Market Concentration in Europe: Evidence from Antitrust Markets« is available as *DIW Discussion Paper* No. 1930. This piece also appeared as a promarket column and as a DIW Wochenbericht (in German).

The Leniency Rule Revisited: Experiments on Cartel Formation with Open Communication

In most countries, agreements that are designed to distort competition, e.g. in the form of coordinated pricing behavior, are prohibited (e.g., Article 101 of the Treaty on the Functioning of the European Union from 2012). Despite being illegal, however, cartels are regularly formed in various markets all around the world. In attempting to hinder and destabilize cartels, competition authorities partially rely on corporate leniency programs that exempt a firm from paying a fine if it provides evidence about the illegal activity to the authorities that helps in the prosecution of that cartel.

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In many recent cartel cases, the leniency rule played an important role and the general perception appears to be that its introduction was successful as it increased the number of prosecuted cartels. As the number of active cartels that are not prosecuted is unknown, the validity of this claim is hard to judge. BCCP Doctoral Student Maximilian Andres, BCCP Fellow Jana Friedrichsen, and their co-author Lisa Bruttel, therefore, conducted a laboratory experiment on the topic, where successful and stable cartels are also observed.

The authors study the effectiveness of a corporate leniency program in repeated Bertrand competition where the same three firms repeatedly interact and may communicate in free-form chat before they set their prices in a given round. The focus of their study is on the role of communication. Importantly, their study allows for distinguishing innocuous communication from chat content that is related to the establishment or conduct of a cartel. In particular, their experimental design features the human judgment of communication and competitive conduct that takes place during the investigation of the competition authority.

It turns out that, in this setup, a leniency rule does not significantly affect any relevant outcome. The study does not find significant differences in cartelization, pricing, or communication between an experimental treatment with a leniency rule and a control treatment without it. This finding is in stark contrast to most of the published experimental literature on the topic, which relies on designs where a) firms in a market can only communicate if they unanimously voted to do so, implying that their market counts as a cartel independent of the realized market outcome, and b) communication has to follow a highly structured protocol in the form of pre-coded messages. Andres, Friedrichsen, and Bruttel argue that those design features are crucial for the different results.

Taken together with the results from previous studies, their study suggests that a leniency policy might not be as effective as often claimed because it only finds a very low self-reporting rate. Specifically, the authors argue that leniency mostly attracts self-reports of firms in cartels that are inherently unstable. In these cases, of course, self-reports may provide information that improves the prosecution of cartels. With a low reporting rate, however, the high number of cartel cases might be worrying because it indicates that there are many more undetected cartels.

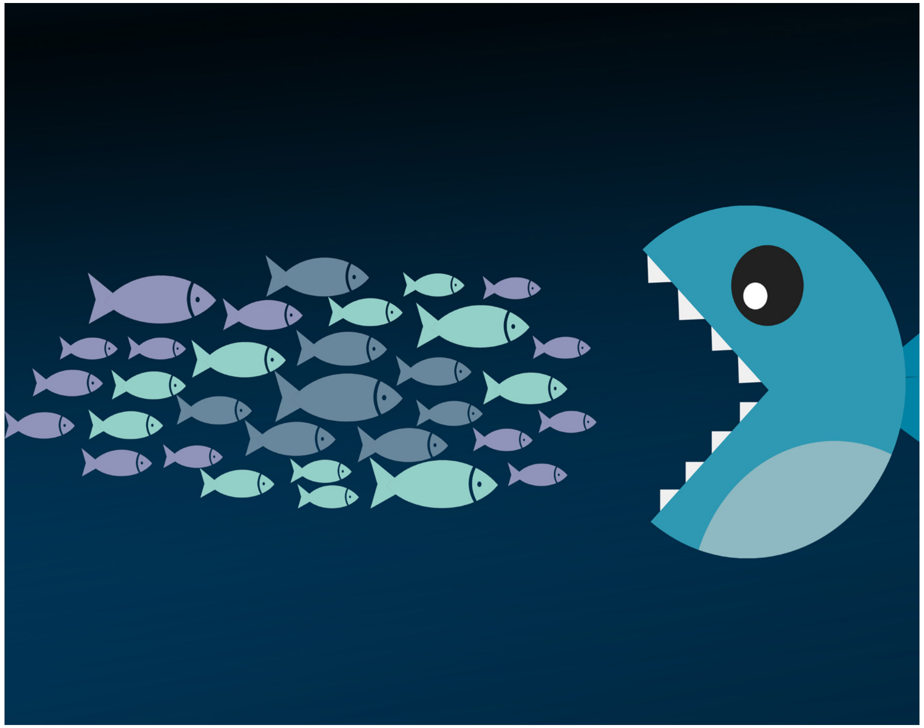
The full paper »The leniency rule revisited: Experiments on cartel formation with open communication« is available as *DIW Discussion Paper* No. 1926.

How Do We Stop Digital Market Monopolies?

New research which was conducted by BCCP Senior Fellow Özlem Bedre-Defolie and her co-author Rainer Nitsche identifies how digital markets become monopolies and offers key insights for policymakers to ensure that in the future digital markets are better regulated and do not 'tip' towards monopolies. The research reviewed existing literature, many current and past examples to identify the key market characteristics that facilitate tipping and those that mitigate it. The authors ultimately suggest a simple guide for competition policy intended to prevent tipping.

The researchers state that there are several fundamental reasons as to why some markets with multi-sided platforms (MSPs) 'tip' into a monopoly. For instance, in Europe, general search markets have tipped for Google, and many social media markets have tipped for Facebook. A reason for tipping is the barriers to entry caused by positive network effects within the same group of users. In many digital marketplaces, such as social networks and search engines, the benefits of using the platform increase as the number of users increase. For instance, the more people use Google, the more powerful their search algorithms become, and the more people use Facebook, the more interesting and valuable the content becomes. This causes a barrier to entry and expansion for competitors with less users that do not benefit from these positive network effects to the same extent.

The authors propose to identify network effects that are essential to the core value provided by an MSP. They argue that tipping is more likely if essential services are free, like free search services, or free social media networks. However, if essential services are generated by matching two sides and at least one of these sides have to pay, like for job matching, dating, and real-estate platforms, tipping may be less likely.



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They argue that besides positive network effects and free essential services, single-homing (using only one platform), and high switching costs facilitate tipping in markets with MSPs. They state »Many MSP markets of ridesharing, music and video-on-demand streaming, delivery services, and dating apps have not tipped yet, and competition commissions must follow these closely to ensure they do not become monopolies, too.«

The researchers emphasize that policymakers need to evaluate carefully platforms strategies that raise single-homing and make switching to competitors more costly. For instance, exclusive dealing provisions with popular product sellers or content providers could facilitate tipping by enhancing the competitive advantage of incumbents with a strong market presence. Similarly, platforms offering personalized services (like recommendation systems, reputation mechanisms), lengthy sign-up processes, and complimentary services can also facilitate tipping by raising users' costs of switching to rival platforms. On the other hand, they identify factors that mitigate tipping as negative network effects (like the competition between sellers on an e-commerce platform), ›local‹ network effects (like local food delivery, real-estate markets), multi-homing, differentiation between platforms (for example, via curation of providers of products or services on one side of the market) and innovation.

The researchers present a tool, which market regulators and policymakers could use to assess the likelihood of tipping. The tool uses four relevant questions for the assessment: Are there factors that diminish the value of a growing multi-sided platform? Are there factors that make it easier for smaller platforms to acquire more users? Or make these smaller rivals attractive to at least some users? Are there platforms active in one market that benefit from activities or a strong position in another platform market?

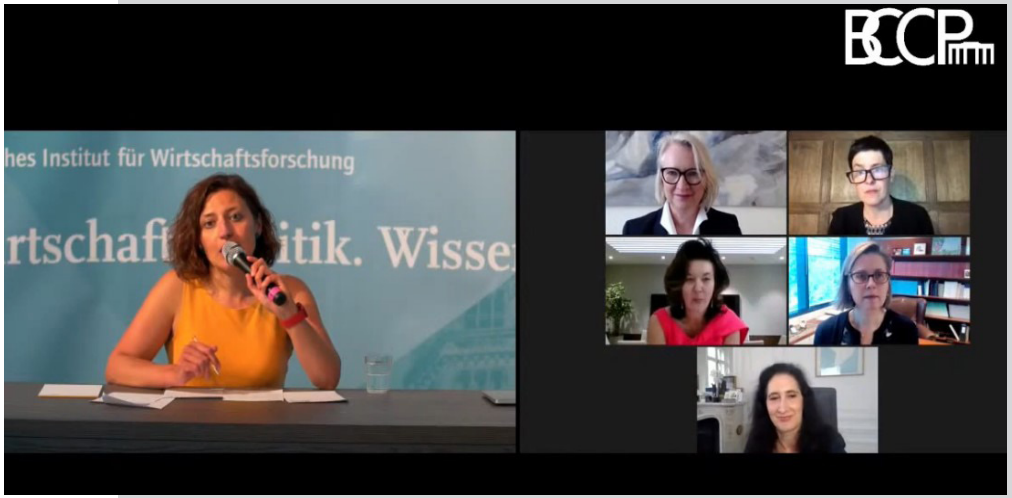
Policymakers aim to ensure that competition stays healthy. However, the identification of markets that are likely to tip is a challenging task. »Competition authorities are increasingly concerned that their tools are not fit to deal with markets that have digital multi-sided platforms,« says Rainer Nitsche. »The challenge for policymakers will be to avoid tipping and at the same time maintaining the many benefits of multi-sided platforms.«

The four key questions proposed can support policymakers and competition authorities, like the European Commission, to identify which markets are close to tipping. This is prerequisite for policy intervention to stop monopolization before it occurs.

The full paper »When Do Markets Tip? An Overview and Some Insights for Policy« is published in *Journal of European Competition Law & Practice*, Volume 11, Issue 10, 2020, pp. 610-622.

Review: BCCP Online Panel 2021

June 18, 2021, marked the sixth annual Conference and Policy Forum of the Berlin Centre for Consumer Policies (BCCP); this year held as an online panel. The conference focused on the Digital Markets Act (DMA), the EU legislative proposal to regulate digital markets in order to prevent abuses of market power by large digital platforms. Touching upon an issue at the forefront of current European policy debates, around 100 participants, including academics from law and economics, policy makers, professionals, BCCP Fellows, and the interested public joined the webinar.



Panelists Monika Schnitzer, Amelia Fletcher, Cristina Caffarra, Fiona Scott Morton, Isabelle de Silva and moderator Özlem Bedre-Defolie (left picture)
Photo: DIW Berlin/ZOOM SCREENSHOT

During the three-hour panel, Cristina Caffarra (Charles River Associates), Isabelle de Silva (French Autorité de la concurrence), Amelia Fletcher (University of East Anglia and Centre for Competition Policy), Fiona Scott Morton (Yale University), and Monika Schnitzer (Ludwig-Maximilians-University of Munich) discussed five topics related to the DMA. The panel was moderated by Özlem Bedre-Defolie (ESMT Berlin).

Cristina Caffarra opened the panel by introducing the objectives of the DMA, highlighting the need for regulation to prevent abuses of market power in digital markets. Monika Schnitzer noted that while the DMA aims to set up rules to achieve this objective, the two overarching goals of the DMA, namely contestability and fairness, are not exactly defined in the proposal. Isabelle de Silva closed the topic stating that she perceives competition law and the DMA as complementary tools, noting that it is uncertain whether agencies will focus more on the DMA or existing competition laws in the future.

The second topic evolved around the question of the definition of »gatekeepers.« Amelia Fletcher led this topic, pointing out that although the gatekeeper definition seems to mostly target the top four or five tech firms, those controlling entire ecosystems, it retains enough flexibility to capture more firms if deemed necessary, while simultaneously working to avoid inadvertently including them. Fiona Scott Morton and Cristina Caffarra criticized the lack of clearly defined rules imposed on gatekeepers by the DMA, making self-execution (to ensure compliance from those companies) more difficult.

The third topic focused on merger policy and innovation. Monika Schnitzer argued that existing competition laws do not adequately account for the dynamic dangers arising from mergers. By only requiring firms to inform competition authorities about mergers, she finds the current DMA proposal insufficient. Amelia Fletcher and Isabelle de Silva mentioned in this context several recent evaluations and recommendations to improve merger control for big digital platforms.

Isabelle de Silva then discussed the challenges that can emerge for national competition authorities (NCAs) with respect to the implementation of the DMA. The president of the French Autorité de la Concurrence addressed the absence of a coordination mechanism for competition and DMA enforcement, which she considers problematic.

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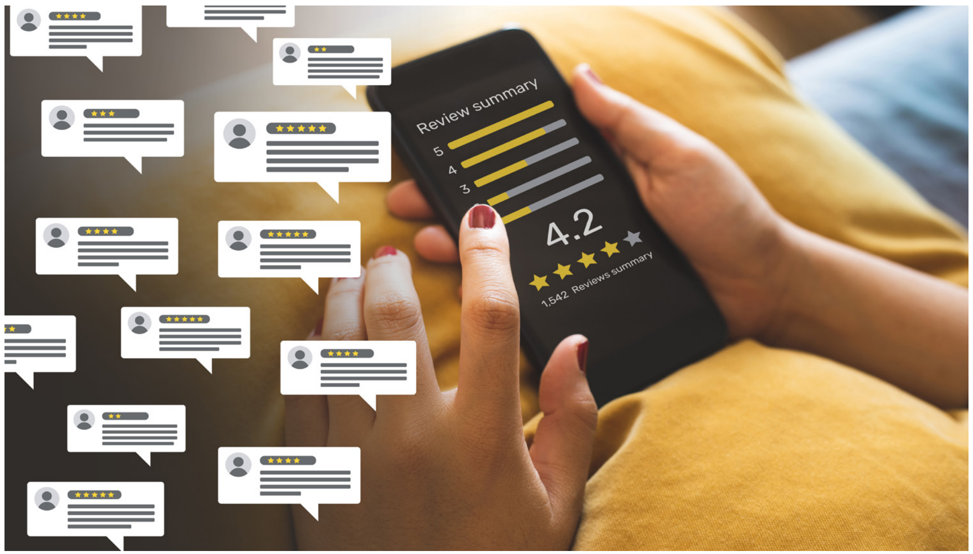
Cristina Caffarra underlined the necessity of clear roles for the NCAs, which implement some of the most important enforcement actions in the big tech sector.

In the final topic, Fiona Scott Morton focused on the five antitrust bills introduced on June 11, 2021, by the House Judiciary Committee in the United States. Amelia Fletcher and Cristina Caffarra praised the introduction of these bills, explaining that antitrust enforcement in the United States has made significant improvements over the last year.

Moderator Özlem Bedre-Defolie
Photo: DIW Berlin

Unlocking Online Reputation: On the Effectiveness of Cross-Platform Signaling in the Sharing Economy

Digital platforms are now pervasive in our daily lives, with two-sided markets emerging as a popular alternative to many conventional sales channels and business models. With billions in venture capital and significant market evaluations, the most prominent players in this platform economy have pushed aside long-established industry incumbents in their respective domains. Examples include electronic commerce (such as Amazon, eBay, Zalando), accommodation markets (Airbnb, Booking.com, ImmobilienScout24), and



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even labor markets (Helpling, TaskRabbit, UpWork). In this proceeding economization and »platformization« of people's lives, all transactions critically rely on a sufficient level of trust. Thus, the 21st century human being is forced to maintain a complex online reputation.

Against this backdrop, complementors (that is, sellers, freelancers, drivers, etc.) increasingly face the challenge of managing their reputation in different environments. In the present study, BCCP

Fellow Timm Teubner and his co-authors Marc T. P. Adam and Florian Hawlitschek report the results from an experimental online experiment considering how and under what conditions reputation (that is, a rating score on a 1-5 star scale) is effective at engendering trust across platform boundaries.

Their study shows (1) that cross-platform signaling can, in fact, be a viable strategy to engender trust and (2) that its effectiveness crucially depends on source-target fit, that is, the contextual overlap between the source platform of reputation and the target context to which it is imported. Naturally, platform complementors may benefit from importing legacy reputation from elsewhere, especially when they have just started on a new platform and have not yet earned an on-site reputation. However, the results also show that importing reputation (even if it is excellent) may be detrimental if there is a mismatch between the source and target as well as, hence, that fit is of utmost importance. Moreover, policy makers have picked up the idea of reputation portability as a means to make platform boundaries more permeable, thus tackling lock-in and the resulting detrimental effect on platform competition.

Consequently, there have been repeated calls to make workers' reputational data portable between platforms. The European Commission suggested studying the »mechanisms for reputation portability, assessing its advantages and disadvantages and technical, legal and practical feasibility.« Further, two ministers of the German government recently demanded that »platform workers must be able to take their reviews to another platform« (Lambrecht and Heil in 2020). The present paper demonstrates that, from a consumer behavior perspective, stipulating cross-platform portability of online ratings and reviews may, in fact, be a viable policy means to address platform lock-in and, in turn, ensure competition.

The full paper »Unlocking Online Reputation: On the Effectiveness of Cross-Platform Signaling in the Sharing Economy« is published in *Business & Information Systems Engineering*, Volume 62, 2020, pp. 501-513.

Matching Code and Law: Achieving Algorithmic Fairness with Optimal Transport

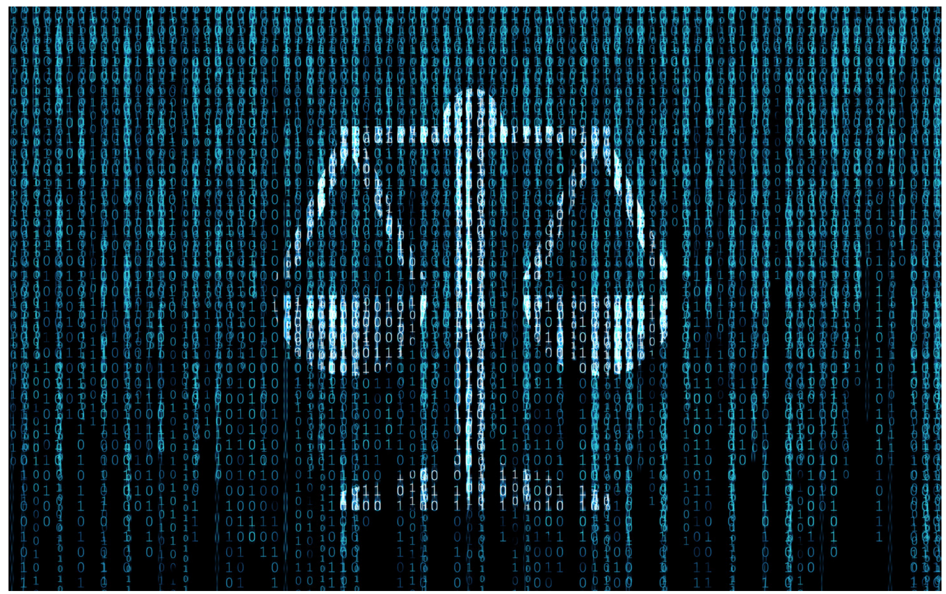
Discrimination by algorithms is increasingly perceived as a societal and legal problem. In response, a number of criteria for implementing algorithmic fairness in machine learning have been developed in the literature. However, some of them are known to contradict each other, both philosophically and/or mathematically. In recently published work, BCCP Senior Fellow Philipp Hacker, together with co-authors Meike Zehlike and Emil Wiedemann, propose the continuous fairness algorithm (CFAθ), which enables a continuous interpolation between two contradictory fairness definitions, namely individual and group fairness. Individual fairness is commonly understood as »similar individuals should be treated similarly.« Group fairness posits that the chance of receiving a positive outcome should be equal across all protected demographic groups.

Consider loan approval as an example: individuals are assessed based on their creditworthiness, which is expressed as a credit score. Credit scores, in turn, are calculated using various individual features, such as net income, credit history, and marital status, etc. One can see directly why the two definitions from above may contradict each other: Individual fairness requires that people with similar credit scores have equal chances of getting loan approval. Group fairness requires that different demographic groups should have the same chances of getting a loan approval. However, if a demographic group has been discriminated against throughout history, this group is less likely to achieve the same credit scores as their non-discriminated counterpart. The concept of group fairness requires treating individuals from the discriminated group more favorably than those from the non-discriminated group, which in turn contradicts individual fairness. At the same time, individual fairness may fail to account for historic and on-going injustice, setting the status quo in stone.

Individual and group fairness definitions are of interest for two reasons: first, these definitions are not only intensely discussed

in the algorithmic fairness literature, but they also carry a legal meaning and are used in legal debates. This motivated the authors to provide an algorithm that may achieve compliance of machine learning models with current anti-discrimination legislation. Secondly, these two fairness definitions can be translated into mathematical definitions that, in turn, allow for a rigorous continuous interpolation between individual and group fairness. Reconsidering the example of credit scoring, the authors define a score distribution as individually fair if it reflects an individual's observable creditworthiness. A score distribution is defined as group-fair if it does not disclose any information about an individual's demographic group membership. This is also referred to as statistical parity in the decision outcome.

The authors then provide a continuous interpolation framework using optimal transport theory, a powerful theory of contemporary



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mathematical analysis, which allows the decision maker to continuously vary between these concepts of individual and group fairness. As a consequence, the algorithm enables the decision maker to adopt intermediate »worldviews« on the degree of discrimination encoded in algorithmic processes, adding nuance to the extreme cases of »we're all equal,« which translates to group fairness, and »what you see is what you get,« which translates to individual fairness.

The authors discuss three main examples (credit applications; college admissions; insurance contracts), and map out the legal and policy implications. In areas where more group fairness is warranted, decision makers may decide to transform individually fair scores into group-fair scores that treat different groups statistically in such a similar fashion that the finding of discrimination is practically impossible. Note, however, that the constraints of positive action law (the EU variety of affirmative action law) must be adhered to. On the other hand, if decision makers have valid reasons for treating different groups statistically differently, they may implement individually fair scores, further distancing themselves from the fulfillment of group fairness. In that case, differential outcomes between protected groups must be justified before the law. Courts must decide whether the reasons provided by the decision makers are adequate – pointing to the persevering relevance of legal facts, discourse and argumentation beyond the precinct of fairness metrics proper.

The full paper »Matching Code and Law: Achieving Algorithmic Fairness with Optimal Transport« is published in *Data Mining and Knowledge Discovery*, Volume 34, 2020, pp. 163-200.

How Minimum Wages and Consumer Preferences for Fair Treatment of Workers Interact

The behavior of firms with respect to ethical issues, such as the treatment of workers or the impact on the environment, is receiving increasing attention. Consumers can make their purchasing decision based on how firms treat their workers or the environment. As a result, it can pay for firms to behave ethically in order to attract such consumers. Alternatively, the traditional economic approach to such issues is regulation. In this approach, the government prescribes the fulfillment of certain standards and does not rely on individual consumers' willingness to pay from their own pocket to buy more expensive products that they consider to be more ethical. This raises the question of how the preferences of consumers and regulation interact. Specifically, will regulation undermine the consumers' motivation in the sense that if firms are forced to satisfy a certain, but relatively low standard, consumers are no longer willing to pay a higher price by switching to a firm that follows more ambitious standards? If this happens, the overall effect of regulation is ambiguous.

A sizable body of literature based on laboratory experiments shows that people are concerned with fairness and are willing to forego earnings in order to punish unfair behavior or reward fair behavior. However, most of this literature deals with reactions of agents in response to how others have treated them. A smaller strand of the literature also finds that participants reward and punish the fair and unfair treatment of third parties. A subset of this literature suggests that this behavior tends to survive even in markets, whereas other contributions indicate that market interactions per se already crowd out fairness. The finding that fair consumer choices can be observed in markets is important, because people may decide more selfishly in markets, since their impact is small and they believe that their choice will not affect the behavior of firms. Furthermore, consumers may think that what they do not buy will be bought by others, which undermines their own impact.

BCCP Senior Fellows Dirk Engelmann and Dorothea Kübler and their co-author David Danz investigate the impact of regulation in such a market, where consumers can try to influence the behavior of firms. Specifically, they investigate the effect of a minimum wage on the intrinsic fairness of consumers. In each experimental market, a single consumer interacts with two firms, which are composed of one manager and one worker each. The manager sets prices and wages, while the worker takes no active role and, hence, has no power to affect the firm's result. The consumer knows the prices and wages of both firms. In the base scenario, wages are unregulated. In an alternative scenario, wages are regulated to meet at least a given threshold, which is, however, far below a wage that would amount to an equal split of earnings among workers, managers, and the consumer. In line with earlier research, consumers are frequently buying from the firm with the higher price if it also pays the higher wage. In the presence of a minimum wage, they do this less frequently. However, the negative indirect effect on worker's wages through a decreased willingness of consumers to pay more for higher wages is smaller than the positive direct effect of the minimum wage that is observed in situations where consumers and firms act relatively selfishly and, hence, wages would otherwise be below the minimum wage. Thus, in the setting of this study, the total effect of the minimum wage is positive for workers.

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Overall, the experiments show that regulation can crowd out intrinsic fairness concerns, thereby counteracting the direct effect of a minimum-wage regulation. Whether this crowding out dominates the positive direct effect and, hence, whether the total effect of the regulation is negative or positive, depends on the specifics of the market.

The full paper »Do Legal Standards Affect Ethical Concerns of Consumers« is available as *CRC TRR 190 Discussion Paper* No. 234.

Exposure to Inequality May Cause Under-Provision of Public Goods: Experimental Evidence

Economic inequality is usually associated with the unequal distribution of personal income or wealth. However, inequality in access to public goods, such as education or healthcare, may have more detrimental impacts on society. With the increasing use of the internet and social media in an ever more globalized world, people are exposed to economic inequalities more and more frequently. It is now also easier for taxpayers to compare their government's performance with that of other countries. Ultimately, tax compliance may depend on the perceived benefits of the public goods financed via the tax system. The Covid-19 pandemic constitutes a good example. Since its outbreak, people have been closely following developments in other countries, including healthcare and vaccination efficiencies. An important resulting question is how such news, allowing for efficiency comparisons, affect tax-payer behavior?

This question is rather difficult to investigate with observational data due to many unobservable factors, including differing tax systems, culture, and types of public services. To overcome this difficulty, BCCP Fellow Levent Neyse and his co-authors Pablo-Brañas Garza and Elena Molis conduct a laboratory experiment studying how making inequality more salient affects people's tax compliance.

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For this purpose, they ran a public goods game, a well-known experimental tool for investigating tax compliance and cooperative behavior. In this game, a number of participants (for example three) each receive an amount of money (for example 10€). They then decide how much of this money to keep and how much of it to allocate to a public good project. The experimenter (in the role of the public authority) multiplies the total amount collected in the public pool with a multiplication factor and distributes it among the players equally. In the end, players earn what they keep to themselves and also the return they

receive from the public good. Using this simple game, we investigate how inequality in personal returns, measured as the so-called marginal per capita return, as well as information about such inequality affect contributions to the public project.

The results show that participants, who knew only about their personal benefits, contributed more if they had higher returns from the public good. This is not surprising as existing studies also show this relationship. However, when the authors informed the groups about the existence of groups with higher and lower returns, the contribution gap increased drastically. In particular, when participants with low-benefits learned about the existence of the high-benefits group, they almost stopped contributing altogether.

Does this mean that transparency regarding inequality hampers tax compliance? Not on its own: the authors ran the same experiment again, this time introducing smaller inequality in returns from the public good between high and low benefit groups. This time, the polarization observed in the first experiment disappeared.

Thus, we learn that, even if all other conditions are the same, merely knowing that people are being treated unequally can yield strong tax evasion. Therefore, one solution to increase tax compliance is to fight extreme inequalities, even if it is impossible to prevent them completely.

The full paper »Exposure to Inequality May Cause Under-Provision of Public Goods: Experimental Evidence« is published in the *Journal of Behavioral and Experimental Economics*, Volume 92, 2021, 101679.

How Does a Nationwide Alcohol Ban Affect Injury-Related Mortality?

Excessive alcohol consumption is common in many developing and developed countries, particularly amongst the poor. It has been associated with numerous social harms, including motor vehicle collisions, violence and other crimes, risky sexual behavior, long-run adverse health effects, reduced productivity at work, mortality, and morbidity. These harms are often borne by other individuals in society, either directly (as in the case of interpersonal violence) or indirectly (as in the case of public health insurance). Consequently, questions regarding the morality, (religious) norms, and correct societal regulation of alcohol have been debated in societies around the world for over two centuries, with virtually all modern and historical societies placing legal and religious constraints on alcohol consumption.

It is crucial, therefore, to accumulate robust empirical evidence that allows us to construct a clear picture of the true influence of alcohol on society. Despite this, our current understanding of the causal impact that alcohol has at a societal level is largely limited to the estimates of theoretical models. There is a scarcity of direct causal evidence at a societal level. One reason for this is that it is rare to observe an abrupt abatement in alcohol consumption in the entire population of a country. Without an exogenous shift of this nature, it is difficult to parse the influence of alcohol consumption on a particular outcome from the influence of the personal characteristics of individuals who choose to drink heavily.

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The sudden and unexpected ban on the sale of alcohol in South Africa on July 13, 2020, (implemented to reduce trauma admissions to hospitals, thereby making more space for COVID-19 patients) provides a rare opportunity to understand how alcohol consumption influences behavior and outcomes at a societal level. A recent paper by BCCP Fellow Kai Barron and his co-authors Debbie Bradshaw, Charles D.H. Parry, Rob Dorrington, Pam Groenewald, Ria Laubscher, and Richard Matzopoulos evaluates the impact of this five week alcohol prohibition on mortality due to unnatural causes (e.g. interpersonal violence, motor vehicle collisions).

The authors find that the policy reduced the number of unnatural deaths by 21 per day, or approximately 740 over the five-week period. This constitutes a 14% decrease in the total number of deaths due to unnatural causes in the country. This reduction was predominantly confined to men (who constitute approximately 80% of the 50 000 unnatural deaths in South Africa in a typical year). Furthermore, approximately half of the effect was amongst younger males, aged 15-34 years.

The authors argue that the estimated effect size of 14% represents a lower bound on the true impact of alcohol on short-run mortality, and underscores the severe influence that alcohol has on society - even in the short-run. This is valuable as it provides policy makers with robust evidence about whether reducing alcohol consumption is an effective way to save lives in the short-run. It therefore contributes evidence towards the larger discussion regarding the aggregate costs and benefits of alcohol consumption for society.

The full paper »Alcohol and Short-Run Mortality: Evidence from a Modern-Day Prohibition« is available as an *SSRN Discussion paper.*

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.

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