



The workshop on competition and regulation in markets for goods and services

September 2nd 2015

Frode Steen (Norwegian School of Economics)

Timothy G.A. Wyndham (Norwegian School of Economics)

Contents

- Introduction..... 3
- PROGRAM..... 4
- LIST OF WORKSHOP PARTICIPANTS: 6
- Competition and regulation in markets for goods and services 7
 - Presentation of the survey 7
 - What are digital markets? 7
 - What are the economic characteristics of such markets? 8
 - Important cases, policies and links to research 8
 - Response from academia 9
 - Response from policy 9
 - Discussion 11
- The economist between the lawyer and the decision maker: How to bridge the gaps 13
- Competition policy in international digital markets..... 16
 - Provocative thoughts from policy and academia..... 16
 - A new price theory IS needed 16
 - Discussion 17
- Roundtable: How has IO research contributed to policy and practice? 18
 - Discussion 19

Introduction

The COEURE Coordination Action (which stands for COoperation for EUropean Research in Economics) brings together the key stakeholders in the European economic research space – funders, policy-makers and researchers – in a process of stocktaking, consultation and stakeholder collaboration. The aim of this process is to identify the knowledge gaps on key EU economic policy issues and assess the current challenges and opportunities facing European-based researchers, with the ultimate goal to inform the European agenda for research funding. It is funded by the European Commission and carried out under the initiative of the European Economic Association. More info at www.coeure.eu

This report summarizes the workshop, devoted to “Competition and regulation in markets for goods and services”, which has been one of twelve thematic workshops organized by COEURE as part of its stockholding exercise. It brought on September 2nd, 2015 together a small group of high level scholars as well as high level policy-makers and other stakeholders who discussed the research frontier in these areas. The workshop focused on policy experience and policy challenges in competition and regulation. It had as an objectives to form a grounded view on the role of scientific advice in EU policy decision-making and identify knowledge gaps, and document and discuss the state of European research on these themes and the challenges and opportunities facing European-based researchers.

The scientific committee consisted of Marc Ivaldi (Toulouse School of Economics), Nikolaus Vettas (Athens University of Economics and Business) and Frode Steen (Norwegian School of Economics).

Timothy W.A. Wyndham from Norwegian School of Economics had the major responsibility for the minutes.

The workshop took place at Université libre de Bruxelles who cordially hosted the workshop.

PROGRAM

- 09H30 – 09H45:** **INTRODUCTION**
Frode Steen (Professor, Norwegian School of Economics)
Philippe Keraudren (European Commission, DG RTD)
- 09H45 – 10H45:** **COMPETITION AND REGULATION IN MARKETS FOR GOODS AND SERVICES: THE SCIENTIFIC STATE OF THE ART**
Chair: **Marc Ivaldi**, (Professor, Toulouse School of Economics)
Nikolaos Vettas (Professor, Athens University of Economics and Business)
- 10H45 – 11H15** **COMMENTS FROM RESEARCH**
Yossi Spiegel (Professor, Tel Aviv University)
- 11H15 – 11H30:** *Coffee break*
- 11H30 – 12H00:** **COMMENTS FROM POLICY**
Lars Sjørgard (Chief Economist Norwegian Competition Authorities and Professor, Norwegian School of Economics)
- 12H00 – 12H30:** **Q&A FROM AUDIENCE**
- 12H30 – 13H30:** *Lunch break*
- 13H30 – 15H00:** **THE ECONOMIST BETWEEN THE LAWYER AND THE DECISION MAKER: HOW TO BRIDGE THE GAPS?**
Chair: **Christian Schultz**, (Professor, University of Copenhagen)
Damien Neven (Professor, The Graduate Institute Geneva)
Miguel de la Mano (Head of Economic Analysis of Financial Markets at DG Internal Market, Professor Brussels School of Competition)
James S. Venit (Partner, Skadden, Arps, Slate, Meagher & Flom LLP, Brussels)
Jérôme Philippe¹ (Partner, Freshfields Bruckhaus Deringer LLP)
- 15H00 – 16H00:** **COMPETITION POLICY IN INTERNATIONAL DIGITAL MARKETS**
Chair: **Jan Bouckaert**, (Professor, University of Antwerp)
BRUNO ALOMAR (MANAGING DIRECTOR, NEW HORIZON PARTNERS)
Jacques Crémer (Professor, Toulouse School of Economics)
- 16H00 – 16H15:** *Coffee break*

¹ Unfortunately Jérôme Philippe had to cancel his attendance.

16H15 – 17H30: **ROUNDTABLE: HOW HAS IO RESEARCH CONTRIBUTED TO POLICY AND PRACTICE**

Chair: **Svend Albæk** , (Coordinator Antitrust, DG Comp)

Kai-Uwe Kühn (Professor, University of Michigan)

Peter Davies (Executive Vice President, Compass Lexecon)

Tomaso Duso (Professor, German Institute for Economic Research, DIW Berlin)

17H30 –18H00: Cocktail

20H00: Dinner (by invitation)

LIST OF WORKSHOP PARTICIPANTS:

Albæk	Svend	European Commission, DG COMP
Alomar	Bruno	New Horizon Partners
Bouckaert	Jan	University of Antwerp
Cantillon	Estelle	Université Libre de Bruxelles
Chizzolini	Barbara	Università Bocconi
Contigiani	Alessandra	Toulouse School of Economics
Crémer	Jacques	Toulouse School of Economics
Davis	Peter	Compass Lexecon
de la Mano	Miguel	DG Internal Market, Brussels School of Competition
Duso	Tomaso	DIW Berlin
Efthimiadis	Tilemahos	European Commission
Haaland	Ingar	Norwegian School of Economics
Ilzkovitz	Fabienne	European Commission
Ivaldi	Marc	Toulouse School of Economics
Keraudren	Philippe	European Commission
Kühn	Kai-Uwe	University of Michigan
Legros	Patrick	Université libre de Bruxelles
Mayor	Eunate	Toulouse School of Economics
McCarthy	Tom	
Moriconi	Simone	Università Cattolica di Milano
Neven	Damien	The Graduate Institute Geneva
Schuett	Florian	Tilburg University
Schultz	Christian	University of Copenhagen
Spiegel	Yossi	Tel Aviv University
Steen	Frode	Norwegian School of Economics
Sørgård	Lars	Norwegian Competition Authorities , NHH
Venit	James S.	Skadden, Arps, Slate, Meagher & Flom LLP
Venturini	Roberto	Université libre de Bruxelles
Vettas	Nikolaos	Athens University of Economics and Business
Wyndham	Timothy G.A.	Norwegian School of Economics
Yeo	Stephan	CEPR

Competition and regulation in markets for goods and services

The workshop was introduced by Frode Steen of the Norwegian School of Economics and Phillippe Keraudren of the European Commission. Steen highlighted the three purposes of the workshop

- i. To present and discuss the survey prepared by Nikolaos Vettas
- ii. To host two interesting discussions on
 - a. The role of the economist in between the lawyer and the decision maker
 - b. Competition policy in international digital markets
- iii. To look backwards and forwards, and understand how has IO research contributed to policy and practice and what it can do in the future

Presentation of the survey

Nikolaos Vettas presented his survey, highlighting four thoughts that had become clear to him. Two warnings and two gaps in the present research.

- i. When topics have new names such as digital markets, it is easy to forget the lessons of earlier literature. Markets are markets, and whilst the labels may change, the analysis will often remain relevant.
- ii. The single market is not uncontroversial. Does the single market imply uniform pricing? Should it? As economists we have concerns about this. But we are not the only voice.
- iii. The data available now is an order of magnitude better than just a few years ago. We have to think quite hard about the empirical methods, given the level of data available
- iv. In terms of theory, in digital markets we are more likely to see competition for the market rather than competition in the market. We therefore need to make our models more dynamic, but naturally this comes at a cost. To see this, we can look over to modern macroeconomics, which is very light on analytical solutions, and heavy on simulations. But if such work is important do we need to change the publication requirements at the top journals?

Vettas also presented some overarching thoughts. First, competition and innovation are both important for growth, but naturally there can be tensions between static and dynamic efficiency. Second, competition policy is now front page news. Third, the digital single market, sector inquiry will investigate the problem and solutions in this high profile arena. Fourth, there is clearly a challenge to economics to continue to provide tractable advice to competition policy.

Vettas continued by presenting his view on some recent challenges on competition policy, including on effects based vs per se rule, the interaction between competition policy and sector regulation, innovation policy, harmonisation, and the role of competition policy at times of crisis.

What are digital markets?

Vettas then proceeded to categorise the various types of digital markets. Markets can use the internet to

- i. Provide access to a good that is offered online in digital form
- ii. Provide access to an end good that is not in digital form
 - a. Provide comparison mechanisms (without the possibility for purchase)
 - b. Provide comparison mechanisms (with the possibility for purchase)
- iii. Provide business to business services

- iv. Provide online auctions (at retail and wholesale level)

What are the economic characteristics of such markets?

Marginal costs are often low or zero. Fixed costs can be high and sunk upon entry. Even for non digital products, digital markets may reduce distribution and storage costs. Price comparison costs for buyers are lower, but inspection costs may be higher or lower. The delay between the purchase decision and receipt of the product may be shorter or longer depending on whether the digital market is for an online or physical product.

Such markets also lead to sellers collecting extensive data about purchasers and potential purchasers. Indeed such data may often represent a market itself. This has implications for data privacy. Services are often provided by multi-sided platforms. Online and offline sales may not always be substitutes but instead complements (for both buyers and sellers).

What are the research implications of such characteristics? Vettas set out his view that research need to consider:

- i. How do we adapt our empirical strategies to maximise the value of the new data that digital markets offer?
- ii. A lot of these characteristics have been seen before. New research needs to build upon past research, not ignore it.
- iii. What can we say about the limits to what the single market *should* mean?
- iv. How can we incorporate dynamic effects, which are clearly important in digital markets, without losing analytical tractability?
- v. How can we better link competition economics with innovation policy? With experimental designs?

Important cases, policies and links to research

Vettas presented some key cases in digital markets. The June 2015 EC investigation into Amazon on MFN clauses in e-books () highlights the tension between avoiding potential restrictions of competition and ensuring that new services are available. The July 2015 investigation into the contracts between Sky UK and a range of content providers concerns, in essence, the ability of content providers to ensure price discrimination between EU Member States is possible. The April 2015 EC investigation into Google appears to treat internet search as an essential service and sets out a concern that Google is using that service to promote its shopping service. The German (and other) online hotel booking cases also covered the tension between ensuring that there is competition between online portals and ensuring that portals are able to monetise their comparison services such that they exist. Following the success at the ECJ of the EC in MasterCard, another investigation has been started looking at various aspects of MasterCard's policies including the ability of retailers to purchase acquiring services from acquirers in other member states.

Moving away from specific cases and into digital market policy Vettas noted the objective of European Commission President Juncker and the recent sector inquiry launch. Normatively, Vettas set out the importance for competition policy to prevent the creation or reinforcement of entry barriers. Market definition and market shares mean less in this environment, competition authorities should focus on understanding the market dynamics and strategic incentives. But, we should be aware (and remind others) that price discrimination, which is seen by many to conflict with the very essence of the single market, does not necessarily harm welfare.

Vettas proceeded to highlight some of the key literature on pricing and vertical relations. In particular, he highlighted work motivated by ebooks and platforms cases. Work by Johnson (2013,

2015), Abshishek, Jerath and Zhang (2015), Foros, Kind and Shaffer (2014), Gaudin and White (2014), Condorelli, Galeotti and Skreta (2013), Edelman and Wright (2015) and de los Santos and Widlenbeest (2014), amongst others were introduced.

Response from academia

Yossi Spiegel felt it was possible for the survey to be clearer on what it is attempting to answer. Are we interested in the relationship between competition policy and innovation policy? What are the crucial factors for the success of digital markets? Are there new questions that digital markets pose? What can economic research tell us about recent high profile cases? What gaps in theory or empirical results? Who will read this survey –policy makers or academics?

If the link between competition and innovation is an important question, then the study should be more definitive on the tension between these objectives. In this context the survey would benefit from discussing new developments such as patent pools, standard setting organisation, pay for delay, FRAND (Fair, Reasonable and Non-Discriminatory) licencing and strategic patenting and abuse of the patent system.

Spiegel explained that the survey does not say anything currently about quality, yet arguably innovation is potentially more important than competition policy. If you could choose between an incremental increase in quality or the same incremental decrease in price, what should you choose? Spiegel argued that the welfare effect of the quality improvement appears to be much larger.

Although the survey's introduction notes the importance of the efficient functioning of digital markets for welfare, and that this will increase over time, the survey does not study the critical factors for the success of digital markets. Spiegel argued that most of the critical factors are regulatory issues such as broadband access, net neutrality, online delivery services.

Spiegel agreed with much of the characterisation of digital markets but felt the survey needs to be more explicit on whether or how this is different from existing markets. This is important to understand whether or how research needs to adapt. How is the large element of fixed and sunk costs different from, for example, the pharmaceuticals industry? What is the research relevance of lower distribution and storage costs? Are search costs really lower? Or do we just do ourselves what we used to outsource to e.g., travel agents? Given the lack of ability to inspect goods, reputation and trust are clearly important, the survey should include the literature on online reviews and ratings systems. Data security is important in online markets, but also in offline markets, so the survey should be clear on why digital markets are novel.

The survey discusses a number of motivating cases, including some geo-blocking, MFN and essential facility cases. The survey needs to be clearer on why these cases are sufficiently novel that we need to scrap existing theories, or to be more explicit how existing theories can cope with these situations adequately. Is it the two-sidedness of the google case, for instance? Spiegel views that existing theory can cope with many of these challenges.

In summary Spiegel felt that the survey needs to go further to convince the reader that digital markets really raise novel questions that requires new theory. Alternatively, the survey should be clearer on how existing theory (and case practice) can address the stylised facts of digital markets.

Response from policy

Lars Sørsgard began by observing the view of Shapiro and Varian in their 1999 book "Information Rules: a strategic guide to the network economy", don't mess around with new theories, we can

adapt the old theories and adapt them to digital markets. Sørsgard also noted the role of IO research as an input into competition policy.

Sørsgard continued by emphasising the need for every decision to be adapted into a legal framework. Every case decision is shaped by both economists and lawyers, which can be frustrating at times for economists, but equally economists need to understand the legal perspective.

Over time European competition policy has become more effects based but the journey has not been straightforward. This can be seen from developments such as:

- The 1997 market definition guidelines which shifted the emphasis from product characteristics to substitution
- The 2000 vertical restraints guidelines which moved away from rigid bans
- The 2004 horizontal merger guidelines
- The 2007 non horizontal merger guidelines

But then on the other side we have examples in the opposite direction:

- The discussion and guidance paper on abuse
- Court decisions such as Intel on abuse

So what challenges does economic research face to infiltrate policy? First, it takes time to frame it for use in policy. Second, robust and easy to explain results have a better chance. To illustrate the process Sørsgard described the development of merger policy.

Farrell and Shapiro published a paper in the American Economic Review in 1990 on the welfare effects of mergers. In their introduction, they proposed some preliminary results on net price effects. For example in a Cournot duopoly there will be downward pressure on prices if the post-merger cost reduction is greater than the pre-merger price cost margin. Werden extended this analysis to differentiated products in 1996.

20 years later Farrell and Shapiro published a paper on upward pricing pressure, with a very stylised model. This was based on the same idea as their paper in 1990, but scaled the price cost margin by the fraction of customers who would have responded to a price increase on one good by moving to the other good. The model is highly stylised as it does not take into account the fact that if the quantity of one product changes, the price of the other product is unlikely to remain the same. Thus, some economists have reservations about the simplicity of this model but at the same time it is easy for lawyers to understand, and indeed it became part of the 2010 American Horizontal Merger Guideline.

Diversion ratios were not new, *per se*, but the explanation within Upward Pricing Pressure (UPP) models was sufficiently clear for it to be implemented. This may come at the cost of other important elements, such as the repositioning of products after the merger, becoming less pronounced. However, it can also play a useful role in bypassing lengthy questions about the relevant market and focus on what really matters to us economists— the theory of harm.

Just as we have seen positive developments we also have some challenges. One such challenge is price parity agreements in digital markets.

A clear example of the price parity debate is the development of a number of cases on hotel online booking. Have we struck the right mix between law and economics in these cases? For instance in the UK the OFT decided to run the hotel online booking case as an RPM case. But the main concern was

the lack of horizontal competition between booking platforms. The decision was heavily criticised by the Competition Appeals Tribunal and has gone back to the competition authority.

Sørgard felt that this case raised some interesting questions for research on economics and law to address. How does the present case law on RPM shape the argumentation of cases with both vertical and horizontal aspects. To what extent can market definition be a constraint on the discussion of the theory of harm? Are there ways, such as UPP in mergers, that allow us to move directly to the theory of harm in RPM cases?

Another challenge is in the area of vertical restraints, where theory has developed a lot in the last 20 years, but the transition into policy has not really materialised. The old ideas of double marginalisation and free riding remain, but there have been important new elements added. Theory has developed regarding the observability of contracts and the scope for opportunism, and non-linear contracts. The range of non-linear contracts available to firms is enormous. But the theory is not yet able to come to robust results. For instance the predictions in the literature on RPM can depend on whether effort of retailers is important and, when thinking about pass through in vertical chains, what if contracts are secret and non-linear?

So from a policy perspective it is challenging to draw firm conclusions from the existing vertical relations literature. So maybe we will never achieve something like a UPP, a legal tool with a basis in economics, that allows us to move directly to the theory of harm. In its place we need empirical research. Empirical research about such vertical issues is far more important to the policy economist than on horizontal mergers.

Another challenge comes from two sided markets. Here theory is relatively young, but is highly relevant for many cases, including merger cases. Theory shows us that higher prices on one side (eg advertising prices) of the market can lead to lower prices on the other (subscription prices for readers). But the challenge is how we should apply this to merger cases?

Consideration of two sidedness has been variable. Sørgard noted three cases (DG Comp's assessment of Google's acquisition of Double Click, the Dutch assessment of an acquisition of a business phone directory and a Norwegian assessment of a newspaper merger) where the two sidedness was taken into account. However, Sørgard noted that Filistruchi et al (2014) in JCLE described several cases where it was not taken into account.

Sørgard also observed the need for incorporating the two-sidedness in an appropriate way. For instance Affeldt et al. (2013) EJ adapted the UPP to a two side perspective. This helped move the theory along, but it relies on the assumption that reader prices don't respond to advertiser prices. For policy it is important to take this into account. Sørgard introduced some ways he thought this could be done. But it would be great if IO researchers could help with the last mile. This is a challenge since the incentives for researchers to this applied work are not very high.

In conclusion, Sørgard felt there had been tremendous progress in IO research in the last two decades. From a policy perspective, there is no need for new theories for digital markets, instead we need to develop further and synthesize what we already know. Additional tools to allow agencies to focus more on the theory of harm (as UPP did) would be great.

Discussion

Miguel de la Mano questioned whether we are asking too much from researchers? Is it a surprise that we don't have much empirical research? Data is expensive and hard to get. Perhaps authorities should do more, as a platform, to coordinate firms that need decisions and researchers that need

data. If that doesn't change then why not just run some experiments to substitute for the role of arbiter when in reality there are two firms with a characterization of reality but no real way of telling which is true.

Spiegel questioned whether there would be scope for gaming in such a system. De la Mano felt there are ways to gain confidence. And, the current approach takes far too long. As far as De la Mano was concerned it can be argued that the marginal returns from theory are not just diminishing but negative. Is it time for a different approach?

Steen noted the challenges and political stakes of allowing an agency chosen by governments to play around with the economy. On the other hand, De la Mano countered that we go to Africa and do field experiments on mosquito nets where the stakes could not be higher.

Tomaso Duso suggested that before one should start with experiments, one might rather require the firms to provide us with price and quantity data to allow ex post evaluation? This might pose a legal barrier? De la Mano argued that this should be a minor problem. The real problem, according to De la Mano, is that the commission in question has

- (a) little incentive to check whether it was the right decision
- (b) little time or resources

De la Mano suggests that authorities implement experiments and tie themselves to data, so that they can force companies to give them the data. This has the benefit of forcing the authority of remaining committed to make a decision in the future when the outcome of the field experiment is revealed.

Patrick Legros noted that experiments are fine, but we need to recognize the limitations of their external validity.

The Commission pushed back on lack of evaluation by DG Comp. DG Comp is in fact doing work on this, but it takes time.

Steen noted that there is a lot of 'free' research time out there. Researchers are obviously happy to undertake research for free, if they get the data, simply because they like doing research. DG Comp noted the legal and practical issues with this, but Steen as had De la Mano earlier, noted that this should be surmountable.

Steen suggested that the new research technology available to us; experiments, can make us think twice about the way we currently do things. De la Mano added to this by noting that the authorities in Europe have a responsibility, even a duty, to provide legal certainty to firms. But, if you read some of the guidelines, you would notice that there are a lot of 'we are not sure', 'it depends'. This uncertainty and lack of clearness means that we are still lagging in terms of where we could be if we were to use some of the ideas that have emerged more recently.

Speaking to differences between European and American motivation for regulation. Bruno Alomar emphasised that merger regulation faces risks for non-economic reasons, for instance in France in the previous decade. DG Comp underlined that this is a reason for empirical research such as *ex post* evaluation of merger. In contrast, Peter Davies, sees the global direction of merger regulation being one of more regulation not less. The core issue is not whether there should be a test but what that test should be, as highlighted by a recent proposal in the UK for the reintroduction of the public interest test.

The economist between the lawyer and the decision maker: How to bridge the gaps

Damien Neven, Miguel De la Mano and James S. Venit and Jérôme Philippe had prepared a joint session on the topic. Unfortunately, Jérôme Philippe had to cancel at the last minute. The participants discussed various issues involving economics and law – and how these two different fields are incorporated in competition and antitrust cases.

James S. Venit opened the discussion, observing that US companies tend to be more sophisticated in using economic arguments strategically than European ones and that there is clearly a broad range of interactions between lawyers and economists. Since antitrust law is essentially economic law, he views the lawyer's role as being to guide the economic input.

De la Mano noted the problem of theoretical cherry picking. Ultimately it is a question of understanding whether a good economic model is effective in answering the question at hand. But this is not straightforward since all models are necessarily simplifications of reality, and the assumptions you need to understand may be explicit or implicit. Both decision makers and firms need to do more to overcome this.

Damien Neven felt we always have to be cognizant of the fundamental limitations on the use of economics in enforcement. In particular, if it wasn't clear before, since the Intel case it is clear that there are those in the Courts and the Commission who do not believe that the role of EU competition enforcement is to maximize welfare. Instead, they refer to the much vaguer German *ordo liberal* objective of effective competition which is really hard to operationalize.

Another fundamental limitation on the use of economics in EU enforcement policy, according to Neven, is the EU objective of market integration. The Sky investigation is a case in point. It is interesting that the Commission has decided to open this case. *A priori*, given the exhaustion of copyright law at national level, price discrimination between countries is not unlawful. Despite these facts, the Commission is bringing the case under the premise that you should not prevent passive sales.

Spiegel pondered whether, if you know that market integration is going to lead to higher prices then can you still go for it. The panel responded that this is exactly the debate. There was a concern that market integration is coming back on to the agenda, at the expense of economics. Market integration issues were actually also raised in the recent Mastercard investigation.

Neven thought that another limit of the extent to which economic analysis can be applied, and which is inherent to the DNA in the competition framework in the EU, is the idea that you should never make any welfare tradeoff between citizens of different countries within the community. You should make sure in whatever you do that the welfare of consumers in any different countries is not negatively affected. This idea is 'in the DNA' of the merger control, because the merger control guidelines essentially instruct the Commission to make sure that there are no negative effects for the included parties. But it is also something that arises in other areas of enforcement, e.g. the debate regarding cross-market inefficiencies. For instance airlines and secondary links. Some consumers will benefit from the secondary links, but some consumer in the trans-continental segment might be worse off. But the Commission could not bring itself to account for these types of efficiencies.

De la Mano underlined that the example of these cross-market inefficiencies suggests a policy conflict. On the one hand, there is apparent tension between market integration versus consumer welfare or enforcing competition in a way that we understand it as IO economists. At the same time the Commission clearly has a strong interest in market integration. However, the Commission refuses to acknowledge the benefits that arise from market integration such as cross market efficiencies. It's

ironic. The EU claims to want an integrated market, but when it comes to balancing significant benefits to a significant amount of consumers, the Commission cannot bear that a small segment of a particular market in a particular country could be somewhat worse off.

De la Mano argued that the US have been better to integrate economic analysis into this thinking. The economist Robert Bork successfully persuaded people that moving from *per se* to *rule of reason* would improve the quality of cases brought forward. Fewer bad cases would arise since plaintiffs would be forced to take into account efficiencies. Similar success has been achieved to some extent in Europe with the 2004 merger guidelines. But De la Mano argued that we haven't been so successful with cases under Article 102, due to the resistance to accept trade offs across consumers or across consumers and firms.

Kai-Uwe Kuhn stressed that we have to be a bit careful about welfare differences between different countries. We can allow welfare improving changes that are not pareto efficient within a country because there we can redistribute. We need to think carefully about when distribution concerns can safely be ignored. De la Mano agreed with the premise but allowed for a different conclusion. In general he doesn't think there is any policy where you can ignore distribution effects. But, he argued that there is clearly a distributional effect also within the *status quo*. Hence, we should discuss weighting methods but there is no reason why we should say that the *status quo* is right or neutral. The *status quo* has just as many distributional consequences as all other policies.

There was an agreement in the panel for a need for some level of distributional assessment. Decision makers clearly care about distribution. There is some evidence that distributional arguments can trump single market arguments within the Commission. Kuhn argued that if we stick to the argument of just adding up welfare gains and losses and ignoring distributional concerns, then we face (potentially rightfully) a major challenge to convince policy makers on competition policy.

Neven noted that the role economists play within the commission is highly dependent on the incentives given to others, and that economists have to play a dual role.

Another trend Neven emphasized was the role of economists, that have changed because of the increased politics of the decision process. The best example is the 'Google fiasco', which reveals an influence of the political environment on the commission. Parties that are well-organized can shift the default case in the public debate. This is a new constraint on competition economics, that the Commission needs to address.

James S. Venit noted that the role of Chief Economist has developed over time. From no staff, to the current staff. More generally, he noted that the attempt to get more effects based policy into Article 102 in part struggled because people did not consider the risk from bringing it into a case that would be defended at the Court by the legal service. The legal service had little incentive to move from the old standard (which they invariably won) to a complex new standard based on effects. In hindsight, the only way to introduce this approach was not to bring a case but to build up a body of practice by rejecting a number of complaints.

Alomar noted that the legal service also has a dual role, to critique internally and to defend externally.

Neven felt that the way judges are selected and their perspectives is an important differentiator between America and Europe. In America the judges see the law as being informed by other disciplines. But in the EU the law is the law. There is therefore an inherent limit on the ability of economists in policy.

It is a challenge that the group of judges is a largely conservative group, albeit with a few exceptions.

The dual role is a strength according to Kuhn. If you are not involved then you can not be 'checks and balance'. But the Chief Economist can choose which cases to support and which to provide 'checks and balance'. The economists role is also to stop the lawyers from supporting 'stupid cases'. However De la Mano felt quite pessimistic about the ability to constrain the Legal Service.

Neven felt that we should be cognizant that one of the main successes of economics in law was in concerted practices in mergers – but it was the court that took the initiative not the Commission. Venit argued that an important change came about with Judge Bo Vesterdorf.

De la Mano noted that the experience with the Intel case was arguably one of the most aggressive judgements against the use of economics in competition law. But even in this judgement they are edging towards a consumer welfare effect in some ways. The Court also concludes that for a large number of rebates we just cannot tell what is 'economically right'. Thus it is difficult to have a *per se* rule. As such, the case is not substituting legal dogma for the economic literature of the last twenty years.

Peter Davies was asked to speak about politicisation. In the UK there are independent decision makers in Phase 2 cases. According to him, the politicians largely stayed out of the process, and when politicians wrote, decision makers treated it as they would any other evidence. Politics can play a more indirect role, for instance through restructuring the authority and controlling the budget.

Politics also plays a role in deciding what the test should be. For instance Ministers now have the option to request a public interest component. Furthermore there is no clarity of how to do trade offs within the authority, despite there clearly being many cases where there are trade offs. The prioritisation policies means that when the poor are being discriminated against, cases are more likely to come. But the weighting of benefits is relatively income neutral.

An example of politicisation was the recent escape at the election. Price caps on retail energy could have been implemented as a manifesto commitment, instead of waiting for the outcome of a competition investigation.

Another example of an increasing element of intervention was seen in the pay day lending market, where the UK parliament intervened to set a price cap before the competition authority had even decided that there was a problem.

So, there is an element of political intervention in the UK that is a marked change from the 2002 White Paper which emphasised the independence of competition agencies because it was seen as good economic policy, even though in individual cases the decision makers remain independent and economic analysis has tended to remain important.

In terms of energy in the UK, there was a clear decision to limit price discrimination in the UK. There had been significant differentials in prices between areas depending on whether a company was the regional incumbent or not. It isn't exactly clear the extent to which this was driven by politics or by the regulator thinking it was the best way forward. But several economists at the time warned that this would lead to a dampening of competition with companies not going after new customers.

The wider lesson, according to Davies, is that running cases is important, having your solution to being accepted as 'the right one' by business and government is important. You need to be seen as doing a good job. To be independent as an advisor you need to generate the evidence to back up the

position. If you can run the process the right way, be transparent in how the evidence collation , and be clear in your decision making then you get to do the next few cases.

Competition policy in international digital markets

Bruno Alomar and Jacques Crémer discussed competition policy in international digital markets. Alomar's focus was on the practical side whereas Crémer discussed the theoretical premise of Vettas's earlier survey presentation.

Provocative thoughts from policy and academia

Alomar noted that "a connected single digital market" was the second of ten priorities for EC President Juncker. Hence, it is clearly a hot topic, but what role for competition policy? Alomar agrees with view expressed by Commissioner Alexander Italianer "characteristics of the Internet such as ease of use, worldwide reach and speed of innovation provide new dimensions to classic competition concerns"

However, Alomar disagrees with the view that competition policy is neutral because it is technical. For example, Alomar believes that political considerations prevailed in the Oracle and in Microsoft cases.

So what role for economic research in such a politicised arena? Alomar, paraphrasing Bo Vesterdorf, stated that economists need to bring a 'good story'. What stakeholders (politicians, bureaucrats, journalists) don't understand, doesn't exist.

Alomar also said that European institutions need to be more careful when it comes to sectoral knowledge. Their staff are very good at applying competition law, but it seems to be a challenge that they lack necessary understanding of the sector.

A new price theory IS needed

Jacques Crémer disagreed with sentiments from the morning session that existing theory can cope with digital markets. In Crémer's view we need a new price theory. We do not understand what price is coming out of in digital markets. We don't know whether the price is too high or too low. In short - we don't have a theory of general equilibrium in two-sided markets. Hence he believes that we have a fundamental problem which means that we are running into strong difficulties.

He viewed competition policy as starting from a nice theory of general equilibrium – a theory which was one of the great achievements of the social sciences. We defined the agents in the economy and gave the conditions for equilibrium. We showed that the equilibrium exists and is efficient. In this economy prices have a real meaning, they represented the social value of goods.

Against this background, the role of competition policy was to make markets as close as possible to the competitive equilibrium. However, this approach depends on the deviations being local , i.e. not too far away from the general equilibrium.

Crémer's basic intuition is that we are no longer close to the general equilibrium, the deviations we are facing are too large. What is driving these large deviations? The characteristics of digital markets. Network externalities, extremely increasing returns to scale in production and competition for the market. In short, we don't know how markets work, and we don't even know what is optimal anymore.

Monopolies need not be bad, and they can even be socially efficient given the characteristics. However, we need to have scared monopolies. For instance, social networks are only winners for a while. Hence, they look for the next winner to prolong their life.

How should competition work to give us efficiency? We don't really know. Consider competition between platforms, and in particular private messages. Both Facebook and Skype bundle private messages to their own core products, which are very different. Would we expect that competition would lead to an optimal design of platforms? Crémer argued, in effect, that it is not obvious that it would, nor whether we would expect too few platforms doing too many things or too many platforms doing too little. But these questions are incredibly important if we want to know whether (and where) to intervene.

In addition to the above areas, we have to recognize that consumers do not always act in their own self interest. What are the barriers to consumers from choosing better or cheaper platforms? Is it a switching costs question, a coordination question? Again, we don't know.

We don't know how to measure welfare. We make competition policy judgements on the basis of consequences for consumer surplus. But how do we measure the social value of Facebook? The two-sidedness and network externalities prevent us from having meaningful values for this. So how can we make solid competition policy if we can't measure welfare?

We don't know whether decentralized competitive allocation is efficient. Take the case of API (Application Programming Interface), where you can log into applications through Facebook, or calendar apps that share information with other apps. These are clearly economic exchanges, incredibly important and a general equilibria phenomenon, but we have no idea how to assess the economic effects of this industry. We do not have the tools to think about these issues.

Summing up, Crémer felt that although this list was not exhaustive, it is clear that small changes in theory cannot be studied satisfactorily. This clearly has an impact for the role of effect based competition policy, and therefore for the use of economics. We need to have new theoretical work on this. However, we should not stop doing competition policy whilst waiting, although we should be modest about what we don't know. It is clear that the EU should finance more work on economic theory in this regard.

Discussion

Spiegel questioned why theory cannot accommodate what Crémer is asking for anymore. Might it not just be a network externality story?

Kuhn noted that while economies of scale are clearly important, economies of scope are often overlooked. Consider the case of Tripadvisor and its journey from review, to comparisons to bookings. Also, consider Uber, an example of how to get scale quickly, and then leverage your scale into other forms such as delivery services. In economics we can be too narrow in thinking about route to market, we should be deferential to the market process.

One participant felt that maybe the job of the competition authority is to keep the monopoly "scared"? Crémer agreed to an extent, but we don't exactly know what is scaring the monopolist. Normally they are scared of losing their dominant position. In a normal market you can see how dominant you are, this is different for digital markets. Take Google, whose entire fortune depends on people thinking they have the best way to find things on the Internet. We don't know how to measure if someone else is better. Whereas we knew how to measure the welfare loss from a steel monopoly we don't know how to measure the loss of surplus due to the Google monopoly!

De la Mano wondered whether the problem these days is due to the fact that monopolies are not isolated anymore. Another participant observed the fact that prices are not a signal anymore.

Kuhn underlined the point that we don't think about barriers to entry properly. Fundamentally, Google is an artificial intelligence company and Amazon is a logistics company. Looking at individual prices by these companies might give some very strange signals, given that these companies are constantly combining and recombining their functionalities to leverage their capabilities.

Crémer's overall point was that we know, to a certain degree but not completely, how to make descriptions of individual cases. However we lack a more general framework based on *principles* to determine this! We are not ambitious enough to look for a theory to do this. This would make it much easier to influence policy.

Roundtable: How has IO research contributed to policy and practice?

Kai-Uwe Kuhn, Peter Davies and Tomaso Duso were invited to prepare a roundtable on how IO research has had effects for policy. They had all prepared short introductions that invited the audience to a discussion on the topic.

Kuhn opened the session. He made the point that in his mind we have seen some areas of progress on this issue. IO theory has disciplined policy formulation in merger policy and in antitrust, at least at the European level. In merger policy substitution is taken into account, dominance based arguments are on the decline with price effects instead being the focus and coordinated effects being less considered. In antitrust, IO theory has generally been taken into account in foreclosure arguments, although this is not universal.

In addition, in terms of implementation, the policy evaluation literature has increased the quality of work in damages analysis and natural experiment allows for testing of price effects.

On the other side, Kuhn concluded that we have a tendency to jump into the detail too much and lose the distinction between first and second order effects. There is also cherry picking by authorities. Often the literature on vertical effects is not well understood within authorities.

Generally, we are too static in our analysis, too worried that new strategies are illegal.

We also need to better recognize the implications of decision making under limited information and the incentives structures within institutions.

Peter Davies noted that econometric or empirical IO has given competition policy several useful tools: Demand estimation, pricing models, merger simulations, short run market power model, and dynamic oligopoly models.

The key lesson from the economic literature according to Davies is that you need think about how to identify causal effects. What data and models do you need?

The class of available models to empirical IO economists to model competition is very large but suffers from constraints on the availability of data and on computational power (particularly in dynamic models). It can be difficult for competition authorities to interpret results with multiple equilibria, but equally those equilibria may not be so different.

Davies posed the rhetorical question: Why haven't these models been used more widely? One reason is that the tool builders don't always understand the context. For example, much effort has been spent trying to bypass data unavailability. But a competition authority has information

gathering powers in cases. Availability of cost data can be a barrier, but a lot of energy has, so far been spent on just adding up turnover and output to get market shares.

There are also risks to the adoption of theory. One risk is that enforcers and participants can be guilty of theoretical cherry picking. It is also important to stress that, when explaining complex models, the modeller needs to be able to explain where the results are coming from.

Tomaso Duso noted that in IO the collaboration between academics and policy makers has been very useful, in particular in *ex post* evaluation. The transfer of knowledge can work both ways. There have been significant methodological advances in the last two decades. For instance, demand estimation was at the research frontier ten years ago, but now you can just press a button in Stata. This is useful but also has limitations, as analysts don't need to be so careful to understand all the assumptions.

Duso went on by concluding that despite structural models being very useful, they are both too simple and too complicated. They are too complicated to explain to judges, and too simple in other respects. For instance, the supply side can be too simplistic but dynamic aspects might not be accounted for, amongst others.

Duso also noted that a lot of work has been done on *ex post* policy evaluations. There is also scope to go further than just looking at the effect of single cases. Why not test entire policies? A final issue, according to Duso, is how IO and regulation relate to productivity and growth.

Discussion

Is there too much focus on, for instance UPP, in decisions? Davies argues not. Although decision can often be written up in such a way, his belief is that normally there are people within the decision making process, in the UK at least, who are taking a much broader perspective, including contributions from the IO literature.

One area where Kuhn thought we could do more was in the interaction with corporate finance. Particularly in mergers you can see lots of examples of companies claiming they would leave the market or indeed go under otherwise. What evidentiary requirements should they meet? How can we come up with a simple set of examples where we can say something. Davies felt that it would be possible to set up a theory of harm using an economic model to show that debt levels indeed are a feature of the markets that prevents or distorts competition although this has some novel property rights issues.

Davies felt that if the outcome of the COEURE process was that there were strong recommendations to the EU to systematically collect data across the EU for a range of important market sectors that would be available to empirical IO researchers through some mechanism, then that would be a very useful contribution.

Sørgard asked Davies how we could get more dynamic oligopoly models in policy analysis. Davies noted that it was difficult, since you need to convince a client and their legal advisers to commission an analysis which, *ex ante*, is hard to identify the usefulness of. Davies made also the point that it is also important that institutions don't cherry pick models. If there can be an open and honest debate about models with the authorities, then more models will be presented to the authority and more models will be commissioned. The commitment to data rooms is also important, this will allow better analyses, by the advisers to the parties, of the data and methods used to build a case against their clients. This will help to ensure, for instance, that conversations about identification can be done properly.