chilling signal that such acquisitions will not be deemed favourable by China. The controversial approach represents a quasi-judicial way to fend off foreign acquirers. Conversely, the rejection could jeopardise Chinese overseas expansion efforts and Chinese companies seeking outbound M&As may encounter an adverse reaction.

The lack of instructive analytical standards and explanation of the reasoning behind the prohibition may raise practical difficulties and render any future review less predictable. More detailed analysis that would provide well-needed guidance and transparency is highly expected in view of China's lack of experience in handling sophisticated antitrust cases. In this vein, the new anti-monopoly regime's prospects are not regarded as promising as there is suspicion for its effective implementation and enforcement. Realistically, the enforcement practices of MOFCOM are only in its infancy and understandably cannot compete with its more experienced counterparts in jurisdictions such as the US and EU.

Report

Agnieszka Kupzok, Monique Sturny-Luder** and Gintarė Surblytė****

Foundations and Limitations of an Economic Approach to Competition Law – Conference of the Max Planck Institute for Intellectual Property, Competition and Tax Law, March 2009

Since the adoption of the European Commission Regulation on the application of Article 81(3) of the Treaty to categories of vertical agreements and concerted practices,[1] the different areas of European competition law have been constantly reformed under the so-called "more economic approach". Starting with the field of restrictive agreements (Art. 81 EC),[2] the reform covered merger control,[3] the abuse of market dominance (Art. 82 EC)[4] and, finally, State aid.[5] The gist of the reform was to shift the focus from a "form-based" to an "effects-based" approach and to make the analysis of the allegedly anti-competitive conduct more appropriate.

However, though the introduction of economic analysis into competition law can help better understand how markets function, the application of a "more economic approach" is not unproblematic. The involvement of economic assessment reduces legal certainty. It requires decent economic knowledge from both competition law enforcers as well as undertakings. Difficulties also occur due to the use of different economic tools or models and changing economic theories, which further raise unpredictability. All this argues in favour of a cautious application of the "more economic approach" in competition law.

The "Foundations and Limitations of an Economic Approach to Competition Law" were analysed at a conference held on 12 and 13 March 2009 at the Max Planck Institute for Intellectual Property, Competition and Tax Law in Munich. Co-hosted by Josef Drexl (Director at the Max Planck Institute, Munich and Honorary Professor at the Ludwig Maximilian University of Munich) and Wolfgang Kerber (Professor at Philipps University, Marburg), the conference was devoted to the critical assessment of the current and future capabilities of a "more economic approach". The issues were addressed through the presentation of papers in six panels and following discussions.

Panel 1: The State of Affairs – Modern Industrial Economics Revisited

Presentations

Michele Polo, Professor of Economics at the Bocconi University in Milan, gave a presentation on the anticompetitive versus competitive explanations

* LL.M IP (MIPLC); Ph.D. candidate at the International Max Planck Research School for Competition and Innovation (IMPRS-CI); scholarship holder at the Max Planck Institute for Intellectual Property, Competition and Tax Law, Munich, Germany.

** Attorney-at-Law (Switzerland); LL.M. (LSE, London); Ph.D. candidate at the Institute for European and International Economic Law, University of Berne, Switzerland.

*** LL.M. (Munich); Ph.D. candidate at the Max Planck Institute for Intellectual Property, Competition and Tax Law, Munich, Germany.

1 Commission Regulation (EC) No. 2790/1999 of 22 December 1999, [1999] OJ L 336/21.

2 Guidelines of the Commission on the application of Art. 81(3) of the Treaty, [2004] OJ C 101/97; Commission Regulation (EC) No. 772/2004 of 27 April 2004 on the application of Art. 81(3) of the Treaty to categories of technology transfer agreements, [2004] OJ L 123/11; Guidelines on the application of Art. 81 of the EC Treaty to technology transfer agreements, [2004] OJ C 101/2.

3 Council Regulation (EC) No. 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the EC Merger Regulation), [2004] OJ L 24/1; Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, [2008] OJ C 265/6.

4 DG Competition discussion paper on the application of Art. 82 of the Treaty to exclusionary abuses, December 2005 (http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf), Guidance on the Commission's enforcement priorities in applying Art. 82 EC Treaty to abusive exclusionary conduct by dominant undertakings, 3 December 2008 (http://ec.europa.eu/competition/antitrust/art82/guidance_en.pdf).

5 Community framework for State aid for research and development and innovation, 13 December 2006, [2006] OJ C 323/1.

of unilateral practices by dominant firms. As a main concern in this respect he identified the prevention of abuses of dominance without chilling competition on the merits. Polo suggested solving this problem by using what he calls an identification approach. First, a possible anticompetitive story is identified which fits the main factual elements of the case and spells out its empirical predictions. Secondly, an alternative competitive explanation and its empirical predictions are developed. In a further step, the two alternative stories are to be compared. In doing so, one can distinguish on the one hand those factual elements which are consistent with both stories and on the other hand those elements which are predicted only under one alternative and thus allow to discriminate between the two stories. The application of this approach (which would have led to a different outcome of a case) was further illustrated by the presentation of the Italian *RDB* case[6] on selective price cuts in the construction material industry.

Economic issues in antitrust were further explored by Daniel L. Rubinfeld, the Robert L. Bridges Professor of Law and Professor of Economics at the University of California, Berkeley. Due to the growing use of empirical methods in competition law, three controversies, namely the issues of market definition, unilateral effects and merger simulation, were addressed. As to the determination of the relevant market, Rubinfeld pointed out that though necessary for unilateral conduct analysis (Art. 82 EC, Section 2 Sherman Act), the market definition in some other cases (e.g. Art. 81(1) EC, Section 1 Sherman Act) is overly demanded by the courts and is frequently unnecessary. Furthermore, increasingly sophisticated methods for the definition of markets, such as cointegration methods, are used by the economists. However, such methods as the chain of substitution analysis can be criticised, because almost anything can be qualified as a substitute, depending on how the criteria are set. For unilateral effects Rubinfeld pointed out that, although it is clear that market power is a prerequisite of the assessment, the problem is that we still do not know how much market power is needed. It is also not clear how useful empirical methods could be. Moving on to merger simulation as a tool to evaluate unilateral effects, a number of difficulties involved were highlighted such as understanding demand, the making of assumptions on price-cost issues and the use of simulation modelling. However, Rubinfeld concluded that although merger simulation requires strong assumptions, it remains a valuable tool to evaluate unilateral effects.

Oliver Budzinski, Associate Professor in the Department of Environmental and Business Economics at the University of Southern Denmark in Esbjerg, focused on problems and limitations of using industrial economics in competition law. First of all he pointed out that the application of sophisticated (empirical) methods of industrial economics requires extensive and high-quality data. Secondly, competition agencies and courts may have an unintended focus on price-elements since modern industrial economics mainly

6 Italian Competition Authority, Provvedimento n. 17522, 24.10.2007.

focuses on (short-run) price and quantity effects, whereas non-quantifiable and long-run effects may wrongly be ignored. Thirdly, competing economic models brought by parties into proceedings may leave the courts with the difficult task to identify the "right" model. However, this issue could be mitigated by setting standards for economic expertise and by appointing neutral non-partisan experts. Fourthly, the use of industrial economics in competition law can lead to an unintended weakening of antitrust enforcement, as new theories and tools do not always fit into the "old" institutional environment. Furthermore, the predictive methods like merger simulation are based on a continuity assumption, whereas it is in fact unclear whether the underlying competition process will remain unchanged post-merger. In particular, mergers in narrow oligopolies as well as abuses of dominant positions can cause structural interruptions on the market. Finally, the use of tools such as simulation models, econometrics and case-specific modelling creates significant costs which must be compared to the benefits involved. As a result, a considerable part of the addressed limits of modern industrial economics refers to an (overly-extensive) case-by-case approach. However, Budzinski suggested that insights from modern industrial economics can be used to shape better competition rules and presumptions.

Comment and Discussion

In the comments to the three presentations, Laurence Idot, Professor at University Panthéon-Assas (Paris II), agreed with the problem of data availability, as well as costs and time for collecting it. She further expressed concerns that not all areas of competition law receive the same level of attention, perhaps because not all practices are equally well suited for economic analysis. She emphasised that it is not only important to develop economic tools, but that it is also crucial to control the reliability of such tools.

In the subsequent discussion, the question was raised as to how far economic externalities, such as the global economic crisis, can affect and influence industrial economics. It was argued that the analytical tools of economics were capable of predicting most of the problems which arose in the global economic crisis. Rather, the issue was that regulators were not receptive. The argument that the change of environment was followed by a change of tools was supplemented with the statement that over time not only the environment, but rather our focus changed (e.g. on Art. 82 EC or merger cases), which leads to the question why this shift in focus occurred. It was further pointed out that experience with a specific practice may lead to the conclusion that a simple rule previously applied proves to be wrong and that a more complex standard for assessment is necessary. However, this raises concerns as to the predictability. In order to improve predictability, the development of a common understanding of which behaviour is more accepted was considered to be more effective than safe harbours, since it may not always be clear-cut whether a practice falls within the safe harbour. Although the discussants agreed on the benefits of using economics in the development of competition policy, it was admitted that there will always be a "gap" between economics and the law: no legal rule, wide as it might be, will ever fit the underlying economic theory 100%. The raised concern that competition policy could become a victim of economic fashion (e.g., changing attitude towards resale price maintenance) was rejected with the argument that there is a greater risk that valuable new ideas never enter competition law and practice than the danger of unfounded new ideas triggering such changes. It was also emphasised that economics plays an important role not only in the handling of cases, but also in the setting of rules, as it can provide structures on how to evaluate certain behaviour.

Panel 2: The Consumer Welfare Standard from an Economic Perspective

Presentations

Professor Gregory Werden, Senior Economic Counsel in the Antitrust Division of the U.S. Department of Justice, Washington D.C., gave a presentation on the meaning and role of "consumer welfare" in competition law. Werden first noted that the term "consumer welfare" in today's discourse on competition policy generally means consumer surplus. He then pointed out that "consumer welfare" is generally used as the criterion for judging legality or as a guide to the development of legal rules or to the application of the law in particular cases. However, although consumer welfare could be regarded as the ultimate goal of competition policy, Werden noted that by static analysis of welfare we learn nothing about dynamic effects. Moreover, the ultimate goal of merger control laws should be the promotion of social welfare, thus the welfare of all consumers. For the question as to whether consumer welfare should be applied as a guide or test for merger control, Werden suggested that a total surplus standard could be a better test for assessing the legality of mergers. Although merger control analysis should also include an evaluation of long-term effects, the initial focus of such analysis should be on short-term price effects, as they are still predominant. Similarly, the ultimate goal of competition policy in the field of concerted practices and potentially exclusionary conduct of dominant firms should be the promotion of the welfare of all consumers. However, Werden pointed out that the effect on "consumer welfare" as such can neither be the appropriate test for legality, nor an appropriate guiding principle for the application of the law. The focus should rather be on the protection of the competitive process itself.

Viktor J. Vanberg, Director of the Walter Eucken Institute and Professor of Economics at the Albert Ludwig University Freiburg, pointed out that a "more economic approach" raises two major issues: firstly, whether the goal of competition policy should be the promotion of consumer welfare or total welfare – or rather the "freedom to compete" ("Wettbewerbsfreiheit"); secondly, whether an "effects-based" or rather a "form-based" approach should apply. He addressed these two issues from the perspective of constitutional economics. Whereas the question which goal competition policy should pursue is a normative question asking what ought to be (in the form of a categorical imperative or unconditional ought-statement), economics is an empirical science which can thus provide advice only in the form of hypothetical imperatives (conditional ought-statements). In a democratic polity, policy advice to citizens should be supported by arguments that convince citizens that following the advice supports their mutual advantage and their common interest. This aspect has not been recognised by welfare economists, who typically advise on aggregate social welfare effects, which entails that sub-groups of citizens may suffer. The polity of a private law society commits to respect the private autonomy of the individuals involved, including the freedom to compete. Such freedom is restricted only through negative or prohibition rules. With respect to the controversy on whether the goal of EU competition policy should be "freedom to compete" or "economic efficiency", Vanberg pointed out that one should distinguish more carefully between the constitutional level (choice of rules) and the sub-constitutional level (choice within rules) of competition policy. Though efficiency or welfare considerations could be important at the constitutional level, applying such considerations at the sub-constitutional level, i.e. to the judgement of individual cases, would mean to subdue the exercise of economic freedom of individuals to welfare considerations, which would be against the grain of a private law society. Finally, an "effects-based approach", seeking to decide each case on its own merits, may reduce legal certainty and would be inconsistent with a private law system. The limits of our knowledge make guidance through rules indispensible. A form-based or rule-oriented approach allows us to compare patterns of outcomes with rules. Economics can give valuable knowledge on the constitutional level about how such rules should be drafted.

Martin Hellwig, Director of the Max Planck Institute for Research on Collective Goods and Professor of Economics at the University of Bonn, elaborated on the normative foundations of competition policy by looking more closely at the "cons" of both welfare economics and freedom of competition as goals of competition policy. With respect to the "cons" of welfare economics, he first of all noted that it is not clear what is meant by the term "efficiency". The mere focus of welfare economics on efficiency considerations neglects the potentially severe impact of a practice or a merger on distribution. Turning to the "cons" of the freedom of competition approach, Hellwig pointed out that the vagueness of the term "freedom to compete" is problematic. This approach ignores the need for a measuring rod to appraise the relevant trade-offs between (i) inter-brand and intra-brand competition, and (ii) the rights of dominant companies, the rights of competitors and the rights of suppliers or buyers. Although the preservation of the market structure cannot be treated as an absolute priority since a dominant company's right to compete on the merits must be respected, German and European competition lawyers seem to assume too readily that market power is the product of illegitimate behaviour and that dominant firms engaged in abusive behaviour. In particular in case of ambivalent practices, trade-offs must be considered. Finally, Hellwig suggested that a "consumer surplus" standard, according to which a given practice is analysed by looking at the effects on the well being of the other side of the market, could be a useful standard in attempting to understand competitive issues, although even then some difficulties remain with judging the trade-offs between consumer surplus today versus tomorrow, or between consumer surplus upstream versus downstream.

Comment and Discussion

Appraising the presentations, Daniel Zimmer, Professor at the University of Bonn and member of the German Monopolies Commission, pointed out that there is still no international consensus as to what the term "consumer welfare" exactly means. According to Zimmer, "consumer benefit" could serve as a proxy for competitive forces. He also cautioned that the focus in merger control only on short-term effects, even if they are predominant, is a risky approach. With regard to an efficiency or welfare economics approach he agreed that it tends to be technocratic and dirigiste. Furthermore, he raised the question as to whether there is an intra-economic explanation why a consumer welfare (or benefit for the opposite side of the market) decision rule should apply. With respect to the freedom of competition approach, Zimmer pointed out that freedom of competition also encompassed freedom of contract. Therefore, one should be cautious in restricting it.

The role of consumer welfare in competition policy was also the main topic of the subsequent discussion. The need to differentiate between the ultimate objective of competition policy and the applicable standard which the authority shall apply in practice was highlighted. It was first of all suggested that a consumer welfare standard should be used in practice – not because it is the ultimate competition policy goal, but rather because it would be too complicated to apply a total welfare approach. Furthermore, the treatment of consumer welfare in the *GlaxoSmithKline* case as an objective of competition law was considered to be incorrect. It was further argued that the goal of competition law cannot be consumer welfare since competition policy has to respect and protect individual freedom. In connection with the competition policy debate it was pointed out that the existing link between consumer welfare and freedom to compete on the one hand and fairness as well as distribution issues on the other hand should also be addressed. A further topic discussed was the application of a rule-oriented versus case-by-case approach. Since we can only take imperfect decisions, the application of a case-by-case analysis was rejected. Rather, the use of rules which are not too complicated to apply in practice was supported.

Panel 3: Normative and Institutional Limitations to a More Economic Approach

Presentations

Professor Joachim Bornkamm, Chief Justice of the VI Civil Court of the German Federal Supreme Court, opened the panel by exploring the normative and institutional limitations to a "more economic approach". As it is clear that legal rules have to meet a certain level of clarity, the application of a "more economic approach" is ambivalent. In fact, the notion of a "more economic approach" takes only some of the relevant issues into account, for example, the application of the law, but not the circumstances when the competition authority can step in. Moreover, even a higher standard of clarity is needed if the norms are directly applicable, like Art. 81 EC and Art. 82 EC. Such a need for legal certainty is particularly obvious in practice. Although private enforcement is only a secondary way of enforcing competition law norms, in Germany civil courts often have to answer the question of validity of a contract under Art. 81 EC. Though rather rare under Art. 81 EC, damage or injunctive relief cases under Art. 82 EC are often dealt with in civil courts. Thus, on the one hand, competition rules are based (and, therefore, dependent) on economics which renders the economic reasoning behind these rules relevant. On the other hand, even though the use of economics can be useful in competition law, per se rules in some areas (e.g. resale price maintenance) are important. Similarly, clear-cut rules are necessary for horizontal agreements. Article 82 EC, however, is more open to direct economic influence: while the obstruction in these cases is usually easily identified, the analysis of possible justifications often proves to be more difficult. This is especially true on the example of the ECJ judgments concerning intellectual property rights.

Dirk Schroeder, partner at the law firm Cleary Gottlieb Steen Hamilton in Cologne and Honorary Professor at the University of Cologne, analysed the impact of a "more economic approach" on the judicial control and certain practical limitations to this approach. Competition law limits economic activity, which is generally protected by different fundamental rights. This occurs in, at least, three ways: by requiring prior authorisation of mergers, by prohibiting the abuse of a dominant position and by prohibiting agreements that restrict competition and whose positive effects do not outweigh negative effects. Though crucial in such cases, the role of the judicial control risks to be reduced under the application of a "more economic approach". On the one hand, it could tip the balance in favour of the competition agencies, which possess certain discretion with respect to assessments of an economic nature. On the other hand, the European experience so far seems to be encouraging, as the courts in fact exercise full, instead of a limited, control. As to the practical limitations to a "more economic approach", he observed that in contrast to the past, when legal definitions were created by the legislature or the courts, under a "more economic approach" economic assessment becomes part of the legal rule. This raises the danger of extended agencies' power, as the judges may thus rely on guidelines issued by competition authorities. In turn, this could enhance the role of economic experts, as the judges might no longer feel qualified to apply the rules without expert assistance. This could further lead to considerations as to the differing qualifications of experts, the correctness and appropriateness of the tools they apply, or even the "delegation" to them to decide cases.

François Souty, Senior Counsel to the Director General of Competition, Consumer Affairs and Fraud Repression in the French Ministry of Economic Affairs and an Associate Professor at the University of La Rochelle, expounded on two types of limitations: normative limitations, due to divergent views on economics, and institutional limitations, due to the different object and subjects of competition policy (EU/U.S.). With regard to the divergent views on the economic objectives and the economics of competition law from the 1920s till 2009, four "schools of antitrust" developed in the U.S. over the 20th century were distinguished, namely: the Harvard School (followed by the "Structuralist" and then the Post-Chicago School), the Chicago School, the Industrialists (later "Evolutionists") and, finally, the Nihilists or Schumpeterians (or "Public Choice"). *Normative* limitations are evidenced by the main points of economic divergence between the mainstream "schools", for example the definition and relevance of "barriers to entry" analysis, different views of market definition, an opposition between the "workable competition" and "contestable competition" paradigms etc. *Institutional* differences exist mainly due to different object and subjects of competition law in the EU and in the U.S. Within the EU, the object of competition policy includes prohibitions of private anticompetitive behaviour as well as provisions on the control of State aid. Thus, here the subjects of competition law are both private and public practices. In the U.S., "antitrust" concerns exclusively private sector behaviour and violations of antitrust law are treated as criminal and civil law offences, as opposed to European competition law which treats them mainly as administrative law offences.

Comment and Discussion

The comment on the three presentations was delivered by Oliver Budzinski. Addressing the aspect of predictability, he agreed on the advantages of predictable rules (*inter alia*, reduced transaction costs), but pointed out that any change of the law reduces predictability. In fact, a phase of reduced predictability is acceptable if it is necessary to improve rules. Due to the growing role of economic expertise, he emphasized that there are many other areas where judges rely on experts. Thus, it is hard to agree with the argument that the application of a "more economic approach" would reduce judicial control and enhance the power of agencies. Though a "more economic approach" indeed increases the scope of appreciation, the application of guidelines should not enhance the role of agencies, as guidelines, after all, remain non-binding.

In the following discussion, the scope of appreciation of judges was first of all discussed. It was admitted that, although the application of a "more economic approach" can reduce the scope of appreciation of judges, an opposite experience could be observed in Europe. Furthermore, the danger that judges will "delegate" cases to experts is not necessarily a consequence of a "more economic approach" and thus not an argument for or against it. The need though could arise to train the judges. With regard to a "more economic approach" being a part of the legal rules it was noted that in competition law, from the very beginning, there is less certainty, first and foremost, because of its "functional approach". Thus exactly this has to be reflected and interpreted with the help of legal norms. It was further cautioned that the new EC Guidelines on non-horizontal mergers, which adopt a "more economic approach", could pose bigger problems in five to ten years when at that point other concepts of which we may not be aware of today may be interpreted into the guidelines. Attention was also drawn to the normative foundations of competition law, for example the fundamental rules anchored in the German Constitution on establishing a market economy. Finally, the need to bear in mind that economic theory changes and that there is still no convincing tool to develop competition policy further was emphasized.

Panel 4: Fresh Blood for Competition Law – Innovation and Evolutionary Economics

Presentations

Howard Shelanski, Professor of Law at UC Berkeley, focused on merger policy and innovation. With an approach he developed together with Professor Michael Katz, which attempts to fit the concept of innovation into the basic framework of merger policy, Shelanski exposed two common problems, namely the role of market definition and the treatment of efficiencies. Innovation can be central to merger policy in two ways: through the Innovation Impact Effect, and the Innovation Incentives Effect. In the former, innovation can so strongly affect the relationship between the pre-merger and post-merger marketplace that the current circumstances could only serve as a poor predictor of future conditions. In the latter, innovation can be of itself an important criterion to assess economic progress. Shelanski further pointed out that although there is theory and evidence that support the view that short-run prices tend to rise with concentration, the evidence on the relationship between concentration, innovation and welfare is much less clear and interpretations more complex. Two linkages, namely between concentration and innovation and between welfare and innovation need to be assessed. The former is weakly supported by ambiguous theory and facts: while on the one hand competition itself can spur R&D investment, it is on the other hand argued that large firm size and high market shares are conducive to R&D investment, due to the fact that big sunk costs necessitate high returns to allow cost recovery. Empirical studies do not resolve this ambiguity. The welfare-innovation linkage is also ambiguous. While in theory, firms may invest more than the socially efficient amounts in R&D, in practice, private incentives for R&D typically are too low. Furthermore, small changes in innovation can have very large welfare effects, so that efficiencies are difficult to be projected. As a result, the need to change current standards of merger assessment and burden of proof could arise. In this respect, it was proposed to adopt a flexible approach to market definition, to take seriously the complexity of the concentration-innovation linkage and to treat uncertainty using standard tools of decision theory.

Uwe Cantner, Professor of Microeconomics at the Friedrich Schiller University of Jena, dealt with industrial dynamics and innovation within evolutionary economics. A certain composition of an industry or market and the related performance of firms therein is dependent on the path along which these structures emerged. Thus, a line of research focused on the knowledge and capabilities of actors and firms, as well as on the search and learning processes involved in building them up. The focus on the underlying capabilities for innovation requires a consideration of their behavioural foundations and their embedment in the technological environment. Using the OACK (opportunities, appropriability, cumulativeness, knowledge) approach, Cantner illustrated how ways in which agents bring about new ideas vary. Namely, the degree of differences depends on the four OACK features, for example on the availability of the technological opportunities that the company is able to harvest and economize on. In this aspect, uncertainty of success and risk of investment play a significant role and imply that a simple calculation of an expected value of the returns is not applicable. Thus, the concept of dynamic capabilities, which introduces long-term strategic planning into the agent's behaviour, could be included in the analysis. Furthermore, the combination of the elements of the OACK approach with the behavioural foundations for innovative activities would allow for the heterogeneity of firms in a sector to be related to differences in knowledge and competences built up over time. In this sense, the knowledge and competences of firms are a major source for industrial structures and their change over time.

Wolfgang Kerber, Professor at the Philipps University of Marburg, expounded on competition, innovation and maintaining diversity through competition and focused on competition as a process of parallel experimentation and the importance of multiplicity and diversity of parallel research. Kerber argued that though more assessment is necessary on the effects of mergers, agreements and other business practices on innovation (Shelanski's view) and to extend the theoretical basis of competition policy beyond mainstream, game-theoretic industrial economics (Cantner's view), it should be noted that many theoretical and empirical insights of these approaches have not been used so far in competition law practice so that much more research in regard to both innovation and how it shall be applied in competition law is needed. Thus, Kerber elaborated on the specific economics of parallel processes, or to put it differently, on the merits of diversity which means that a more diverse pool of resources, such as products or technologies, might increase a firm's probability of being capable of responding quickly to unanticipated exogenous shocks, as well as enhance the endogenous capability to develop better solutions to existing problems. Also, availability of multiple independent sources of innovation might be important for rendering the market effective as a selection device. One of the advantages of diversity and parallel experimentation is that a pool of different technologies could be

regarded as a pool of options. Furthermore, he investigated whether diversity and parallel experimentation should be protected through competition law. On the one hand, more parallel innovations (more trials) have overall positive effects, on the other hand, the quality of trials can suffer if too many are conducted. Thus the core question would be what the optimal number of parallel researches ("optimal diversity") is, which cannot be precisely answered at present. Kerber concluded that, although merger and R&D agreements could lead to negative effects on competition (e.g., reduction of parallel innovations), factors on which they depend have not yet been accounted for in the current research.

Comment and Discussion

Appraising the presentations, Andreas Heinemann, Professor at the University of Zurich, with regard to general remarks on evolutionary economics observed that the focus should be on the competitive process: after all, ideas are tried in the market, so that it cannot be predicted at the outset whether such ideas, or which of them, will survive. In this way, the objective of competition policy is to maintain the competitive market structure. Furthermore, Heinemann raised the question as to whether the "4plus" test should constitute and be further promoted as a safe harbour. Finally, he addressed the concern as to how innovation could be better integrated into Art. 82 EC, in particular, bearing in mind the *Microsoft* case, where the court had rejected the argument of Microsoft that the making available of interface information to competitors would reduce its own innovation efforts. The question thus arises as to whether the argument of innovation could be used in favour and on the part of a dominant firm or rather on a whole industry.

The following discussion focused on three issues, namely considerations of market definition, standardisation and application of evolutionary economics. Regarding market definition, the difficulty of defining the relevant market in the light of innovation was challenged, basically due to the constantly changing nature of the relevant products which could further lead to a too broad or a too narrow market definition. However, it was acknowledged that market definition is not complicated in all cases concerning innovation. The standardisation issue was brought up to suggest that standards lead to development of just one technology, thus contradicting the assumptions of the option theory. In this vein, it may be so that even though standards do have certain advantages (e.g., the reduction of transaction costs), they also have the potential of preventing future progress of innovation, in particular in the longrun. This raises the question as to whether competition for the market or rather competition within the market should be preferred in such cases. Also, the need to maintain diversity was highlighted. Though admitted that in markets with network externalities the setting of standards might reduce diversity, it was argued that the possibility of diversity could be maintained in the processes before setting the standard. Finally, it was noted that in the European Commission's approach to the innovation incentives of Microsoft and its competitors, potential can be seen for the use of evolutionary economics, as the European Commission uses implicit evolutionary economic arguments in its decision. It was argued that focusing on short-term effects may be a mistake, but in order to incorporate long-term effects more research would be needed.

Panel 5: Fresh Blood for Competition Law – Behavioural, Experimental, and New Institutional Economics

Presentations

Christoph Engel, Director of the Max Planck Institute for Research on Collective Goods, Bonn, and Professor at the University of Bonn, expanded on behavioural economic explanations of competition and cartelisation by presenting a meta-study, which he had conducted on oligopolies and degrees of collusion. The evidence used for the study included 147 experimental papers, which were published until 2006 on oligopoly experiments with 510 measurable parameter constellations. This evidence was rendered comparable by generating two indices: the deviation from the Walrasian Equilibrium and the Nash Equilibrium. From the formal model, three benchmarks were calculated: the Competitive Walrasian, the collusive Pareto, and the strategic Nash Predictions. As a result, Engel could propose that the degree of collusion between economic actors can have either a strategic or a behavioural explanation, and he suggested that the theory of conditional cooperation could be a promising explanation for varying degrees of collusion. According to the presented concept, persons can be classified as conditional cooperators if they are willing to contribute to the public good as long as the other group members contribute as well. By mapping the oligopoly problem to a linear public good, Engel revealed certain differences between a standard linear public good and an oligopoly and pointed out the need of further experiments in order to show whether the existing differences matter and whether the concept of conditional cooperation can be used for oligopolies.

Professor Bart Wilson from the Economic Science Institute at Chapman University, Orange, California, analysed how experimental economics can be used as a tool to understand market competition. He defined experimental economics as a laboratory method of inquiry for studying how individuals interact in controlled settings defined by a specific set of rules. Wilson pointed out that experimental economics can help shed light on a wide range of antitrust issues. This was evidenced by the presentation of Wilson's recent research on the controversial topic of zone pricing in gasoline markets, which is a practice whereby refiners set different wholesale prices for retail gasoline stations depending on the geographic area. In an experiment with two geographical areas, an isolated and a clustered one, both a zone pricing situation and a uniform pricing situation were simulated, applying computer software which could perfectly enforce both pricing strategies. Wilson demonstrated that uniform wholesale prices hurt consumers since, according to the results of the experiment, consumers in clustered areas paid higher prices when zone pricing was banned, as compared to when it was allowed.

In contrast, consumers in isolated areas paid the same price irrespective of whether zone pricing was allowed or banned. According to Wilson, the reasons for this result are twofold. First, high refiner prices for isolated areas are not the cause for higher station prices in isolated areas, but rather the consequence thereof. Station prices in isolated areas are higher than in clustered areas because consumers prefer not to travel long distances in order to buy at lower prices and because there is only one local gasoline station. Second, uniform wholesale pricing results in the unintended consequence of refiners setting the uniform price level generally higher than the comparable zone price in the clustered area. Drawing conclusions from the zone pricing experiment, Wilson suggested that well-meaning interventions of competition authorities, which are designed to manipulate market allocations, can backfire, because the authorities cannot account for the complex incentives in an intricate industry.

Justus Haucap, Professor at the Friedrich Alexander University of Erlangen-Nürnberg and Chairman of the German Monopolies Commission, dealt with bounded rationality and competition policy. He defined bounded rationality broadly, as any deviation from perfect rational behaviour, and proposed that it should serve as a link between Behavioural Economics and New Institutional Economics. The central question in Haucap's presentation was thus how competition law should be designed in order to take into account the bounded rationality of both competition authorities and courts in deciding competition cases, on the one hand, and of consumers on the other hand. With regard to the former, Haucap highlighted the procedural aspects in designing competition law and emphasized the aspect of evidence, especially the question on how much information the authority needs to collect in a proceeding and who carries the burden of proof. He then pointed out that competition rules should be designed so as to minimize the sum of expected welfare costs from type-I (false positives) and type-II errors (false negatives), as well as information and other transaction costs. As to the bounded rationality of consumers, he argued that behavioural economics can yield interesting insights, especially because final consumers are usually not as rational as assumed by neoclassical theory. As an illustration, Haucap presented the evidence-based examination carried out during the German Monopolies Commission's action against Vodafone and T-Mobile on complaint from the entrant E-Plus. Thereby, an experiment was carried out to model consumer behaviour concerning the complaint, which was based on the market foreclosure argument in which E-Plus argued that the combination of tariff mediated network effects and first-mover advantages (large installed base) had been used to leverage market power. A survey carried out among 1,000 students in order to analyse the relationship between mobile telecommunications prices and customer behaviour revealed that consumers appeared to make substantial mistakes in choosing tariffs. Thus, behavioural economics may lead exactly to the opposite evaluation of certain pricing strategies than a more traditional view with perfectly rational consumers.

Comment and Discussion

Delivering the comment, Professor Andreas Fuchs from the University of Osnabrück recognised that modern economic concepts introduce more features of real life into competition law and thus help better understand how markets work. They may serve as a blueprint for redesigning the competition law concept. Nevertheless, he drew attention to the fact that experimental economics is limited to certain assumptions, as it is conducted in the labs, which neglect a multitude of real market conditions. While the crucial point in the experiment is the design of markets and economic environments, in fact, only parts of the environment can be taken into account and other parts remain unknown. Thus, experimental economics cannot be regarded as an exclusive instrument for assessing economic behaviour.

In the subsequent discussion, first the concept of collusive behaviour was scrutinized and it was recognised that a certain problem remains in that while in experiments individuals interact, such interaction in the market takes place between firms. Therefore, it is not possible to elaborate antitrust rules based only on experiments. Yet, it was commented that many relevant questions only arise once experiments are actually conducted. It was concluded that it is not possible for competition authorities to rely on single experimental evidence. Collection of evidence is crucial for the decision of a competition case. With regard to the concept of collusion, it was pointed out that oligopoly practices may fall under both Art. 81 EC and Art. 82 EC and thus it is necessary to consider whether "collusion" as examined in experiments covers abuses of dominance under Art. 82 and not only cartels and concerted practices under Art. 81 EC. It was also cautioned that taking into account bounded rationality of consumers could be a too far-reaching approach.

Panel 6: The Political Economy of an Economic Approach to Competition Law

With the focus on how improvements in institutional design and institutional capacity can increase the ability of a competition agency to operate effectively, Professor William E. Kovacic, Commissioner of the US Federal Trade Commission, listed at least three mainstream questions that competition authorities face: firstly, why and how much a jurisdiction should rely on competition (instead of alternative models) to organise economic activity; secondly, which economic ideas should underpin the design and application of competition laws; and, thirdly, which approaches to public administration increase the legitimacy of choices among alternative economic ideas. As competition is not the only possible model of economic organisation, the basic question of political economy is why competition should be promoted. Bearing in mind that, in the past, the competition model was suppressed time and again, typically in the face of crisis, Kovacic deemed it important to offer persuasive reasons why reliance on market mechanisms and competition law is the correct approach. Whereas it is undoubted that economics do

matter in competition law, the question remains to what extent. This leads to the assessment as to which economic ideas should shape competition policy. In any case, the choice of economic techniques cannot be decided without careful assessment of how they will be applied. Furthermore, as competition agencies enjoy discretion and a margin of appreciation in applying economic theories to specific cases, it becomes important to increase the legitimacy as to the choices made. The question as to how best to engineer competition policy was surveyed in the FTC's Self-Study ("The FTC at 100"), which aimed to identify areas in which the FTC could improve the institutional foundations on which it operates and tried to identify ways as to how to overcome the dilemma in politics of short-term appointments and consequential underinvestment in long-term capabilities. The general outcome of the Self-Study was a redefinition of what a "good" competition agency is and what characteristics of good administrative practice it should possess.

Josef Drexl, Director at the Max Planck Institute for Intellectual Property, Competition and Tax Law, Munich, and Honorary Professor at the Ludwig Maximilian University of Munich, focused on the political dimension of the economic approach to competition law, placing it in a larger context than economics and the law, and referred to Adam Smith – the pioneer of modern economics, but, above all, a moral philosopher. The analysis of the political character of the economic approach was based on the appraisal of the objectives of competition law, and was then followed by the assessment of theoretical shortcomings of the economic approach and finally explored in the light of normative values. Drexl argued that, although economic efficiency, as the ultimate goal of competition policy, is treated as promoting welfare of society at large, this view seems to be very collectivist. Modern societies, by contrast, are built on the political will of individuals rendering the political support for the law dependent on the acceptance of the law by each individual. Furthermore, since individual competition law decisions take from some and give to others, concerns as to the "distributive justice" arise. Similarly, the second objective of competition law, namely the promotion of consumer welfare, at first glance presupposes making everybody better off. Yet, several political arguments against "consumer welfare" can be raised. First of all, since "consumer welfare" is only used as a criterion for measuring efficiency, the same criticism as for the efficiency standard applies. Secondly, the application of a consumer welfare standard would require predictions on the effects of a certain conduct. However, on the basis of Hayek's definition of competition as "a discovery procedure", it is clear that often only the competitive process itself reveals consumer interests, which are thus rather unpredictable. For example, the European Commission in *Microsoft* was only able to demonstrate consumer preference for certain products, because the market had already produced that information. Thirdly, the problem of conflicting consumer interests arises, in particular where R&D and IPRs are involved which may promote the interests of some consumers but restrict those of others. The economic approach can, furthermore, suffer from several shortcomings, for example, the economic approach could be regarded as being not "economic" enough or even leading to inconsistent policies. Finally, the political dimension of the economic approach could be explored in the light of some normative values, above all, equal treatment and economic freedom. The principle of equal treatment would mean equal opportunity for any additional competitor to enter (however, not to stay in) the market, thus maintaining markets open and increasing consumers' ability to make their own choices. By contrast, allowing firms to rely on an efficiency defence and thus to escape competition law would be a violation of this fundamental principle. By the same token, the efficiency defence can lead to a mistaken concept of freedom to compete.

Discussion

In the subsequent discussion it was added with regard to merger control that the protection of the competitive process in the long run is much more important and sustainable than a possible lowering of prices as a result of the merger in the short-run. Furthermore, efficiency as the goal of competition law was criticised in the sense that if competition policy used the standard of efficiency, which possibly conflicts with the principle of equal treatment, this might cause resistance by the electorate and would hence be inappropriate. After all, competition is an institution that serves everybody (like a common good). Moreover, the application of very simple economic models could open the door to bring in political convictions. The need was raised for better political explanations of a "more economic approach" which would fit the current societies as well as reflect the goals of the EC Treaty and in particular the Lisbon Treaty which, in effect, advocates for human rights and equal treatment. Thus, though general economic theory could, indeed, help better understand how markets work, its application within competition law should not be treated as an absolute concept. It was furthermore suggested to shift to a different kind of consumer protection within competition law: instead of a mere focus on lowering of prices, it was proposed to focus on consumer sovereignty meaning that consumers have more choice. Finally, the question was raised as to how economics should be used in competition law: whether it should be applied only in particular fields such as mergers, or whether it should be involved in the designing of appropriate rules such as a structured rule of reason. The need was also emphasied to recall that according to the doctrine of separation of powers the addressee of the question as to what aims competition law should pursue is the legislature rather than the European Commission or the courts.

Closing the conference, Josef Drexl referred to the quotation of Confucius used as his opening remark that "real knowledge is to know the extent of one's ignorance" and expressed his hope in that the conference showed the lack of knowledge as to the particular aspects of a "more economic approach" which would result in a more cautious application of it.