The Effectiveness of Competition Authorities: Four Questions

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When comparing national competition authorities, four questions arise: How great is the risk that the government's powers of appointment could be used to "capture" the competition agency? What are the minimum resources needed to enable a competition authority to function effectively in a developed country? Does the ability to impose sanctions on individuals, as well as companies, significantly enhance the effectiveness of national competition authorities? What are the advantages and disadvantages of charging competition authorities with responsibilities in other, related policy areas as in Germany and the United Kingdom—Are there significant synergies—Is there a danger that priorities will be unclear? The aim of the present article is to discuss, with reference to a wide range of countries, considerations that are relevant to answering these questions.

I. INTRODUCTION

In a previous article for the *CPI Antitrust Chronicle*,[2] Pierre Buigues and I compared the national competition authorities in three EU countries and suggested four questions that are worthy of further study. These questions are:

- How great is the risk that the government's powers of appointment could be used to "capture" the competition agency?

- What are the minimum resources needed to enable a competition authority to function effectively in a developed country?

- Does the ability to impose sanctions on individuals, as well as companies, significantly enhance the effectiveness of national competition authorities?

- What are the advantages and disadvantages of charging competition authorities with responsibilities in other, related policy areas as in Germany and the United Kingdom? Are there significant synergies? Is there a danger that priorities will be unclear?

The previous article surveyed competition authorities in France, Germany, and the United Kingdom to identify similarities and differences in their institutional characteristics and approaches. It found that, in spite of a large degree of convergence, substantial differences still remained. The four questions posed in the conclusion were intended to illustrate the extent of these differences.

The aim of the present article is to discuss, with reference to a wider range of countries, considerations that are relevant to answering these questions. In so doing, I do not suggest that the factors considered here, however important, are the only ones that may have a significant influence on a competition authority's effectiveness.

One major problem in comparing individual features of national competition régimes is that many of these features are highly correlated. For example, well-resourced competition authorities are more likely to be found in countries where competition policy is relatively strict, with strong investigative powers granted to autonomous authorities and high penalties for violations. Such correlations make it difficult to evaluate empirically the relative importance of any one feature of the régime.

There is a body of empirical evidence, as well as theoretical argument, to support the conviction that competition policy can have a positive impact on perceived intensity of competition[3] and on economic growth,[4] at least in developed countries. However, the empirical work so far undertaken does not permit firm conclusions to be drawn about particular characteristics of that policy or the agencies that implement it. Indeed, there are a number of ways in which a competition policy could have detrimental effects on economic efficiency; for example, by imposing excessive compliance costs on enterprises, by the over-use of *per se* prohibitions, or by creating a climate of uncertainty through inconsistent implementation.

ONE MAJOR PROBLEM IN COMPARING INDIVIDUAL FEATURES OF NATIONAL COMPETITION RÉGIMES IS THAT MANY OF THESE FEATURES ARE HIGHLY CORRELATED

Two econometric studies look at the effects of specific features of competition regimes. Voigt[5] examines four indicators of the quality of a competition regime: the legal basis, the application of the "economic approach," the *de jure* independence of the competition authority, and its *de facto* independence. His results suggest that these factors, in particular *de facto* independence, may have a positive influence on total factor productivity ("TFP"). However, this effect is no longer apparent when broad indicators of the quality of state institutions are included in the regressions. A possible reason for this is that Voigt's study covers a wide range of countries including poor, less-developed countries. Tay-Cheng (2011)[6] suggests that a minimum level of economic development may be a precondition for the successful implementation of competition policy.

IT FINDS A STATISTICALLY SIGNIFICANT LINK BETWEEN "BETTER" COMPETITION RÉGIMES AND TFP GROWTH AND, IN A LESS ROBUST WAY, LOWER PRICE-COST MARGINS

Another study, carried out by Lear[7] for the European Commission, looks at the impact of competition policy on TFP and price-cost margins over twelve developed countries. It finds a statistically significant link between "better" competition régimes and TFP growth and, in a less robust way, lower price-cost margins. The measures of the quality of a competition régime (competition policy indexes) are based on detailed features of both the competition law and the competition authority. The authors find that the problem of multicollinearity does not allow robust conclusions to be drawn about the individual impact of each feature. However, the study finds some indications that three factors may play important roles: (i) the formal independence of a competition authority, (ii) the level of sanctions and, especially, (iii) the strength of the authority's investigative powers. The present article touches upon two of these three features, examining one way in which the real independence of a competition authority may differ from its formal status and one way in which penalties for violations of competition law may be strengthened.

As far as the resources of competition authorities are concerned, the Lear study finds a non-significant

effect, although this is probably due to a high correlation with other features.[8] The fourth question, the enforcement of competition policy through multi-purpose authorities, is not addressed by any of the empirical studies.

II. GOVERNMENT CAPTURE

The Introduction cites two studies, Voigt (2006) and Buccirossi et al. (2012), which suggest that the independence of competition authorities may play a significant role in determining their economic impact. Furthermore, a survey carried out by KPMG in 2007 for the U.K. Department of Trade and Industry[9] indicated that respondents ranked political independence third in importance out of 13 factors that influence the effectiveness of a competition regime. The main reason why political independence should be so important is that it is a way of ensuring consistency and predictability in decision-making, provided that the underlying law clearly defines the principles to be applied by the agencies.

LESS THEORETICAL ATTENTION HAS BEEN PAID TO THE QUESTION OF GOVERNMENT CAPTURE OF SUPPOSEDLY INDEPENDENT REGULATORS

Industry capture of government and regulatory bodies has been much studied following Stigler's seminal paper of 1971.[10] Less theoretical attention has been paid to the question of government capture of supposedly independent regulators. Nevertheless, the problem is not entirely ignored in practice, since in most jurisdictions there are some limits to the government's freedom to select heads of competition authorities. In some countries, such as the United States and Japan, the approval of the legislature is required. In others, such as Austria, Belgium, and Canada, appointments are made by a non-executive Head of State.[11] albeit acting on a proposal from the government. In Australia, the national government must consult the governments of the states and territories. Italy is exceptional in that the government plays no formal role in appointments of the members of the board of the AGCM,[12] who are chosen by the two presidents of the chambers of parliament for fixed seven-year terms—a procedure which seems to be designed to minimize government influence, although it does not eliminate the possibility of party-political influence[13].

There are several reasons why government capture should be of interest. Before discussing these, it may useful to outline the advantages of independence.

Voigt[14] & Salzberger list eleven reasons why politicians may choose to delegate powers. Of these, possibly the most important in the context of delegation to independent agencies are:

- to shift responsibility, when the blame attached to taking unpopular decisions outweighs the benefit from popular decisions;

- to resolve problems of uncertainty as to the desirable policy or the outcome of regulation (in terms of either the politician's value-system or his/her popularity);

- to establish bodies that enjoy public confidence when the government fears losing its legitimacy;

• to protect policies against reversal after a change of government by raising the "cost" of change;

• to enhance credible commitment; and

• to reduce politicians' workloads.

The aim of reducing a politician's workload may seem one of the more trivial of these motives but is probably one of the most important, when taken in combination with responsibility shifting. A large proportion of antitrust decisions are of a technical nature and the press, legislators, and the public usually show little interest in them. A politician has little to gain from personal involvement in such decisions, so they would normally be delegated to civil servants. If they are delegated within a government department, the minister runs the risk of incurring the wrath of some significant interest group, the press, or a party donor as the unexpected result of an apparently technical decision taken by those under his authority. The minister can avoid this risk if the decision-making power is delegated to an independent agency. An incidental benefit of this could be that politicians can thereby save time that would otherwise have to be devoted to lobbyists.

FROM THE POINT OF VIEW OF SOCIETY AS A WHOLE, PROBABLY THE MOST IMPORTANT ADVANTAGE OF THE INDEPENDENT AGENCY LIES IN ITS FUNCTION AS A COMMITMENT MECHANISM

From the point of view of society as a whole, probably the most important advantage of the independent agency lies in its function as a commitment mechanism. Society has an obvious interest in having laws that delineate the boundaries between licit and illicit behavior as clearly as possible, and which are consistently applied. The greater the degree of uncertainty, the greater the risk that initiative will be stifled. Where, as in competition policy, it is nevertheless necessary to allow a wide margin of appreciation to a public authority or the courts, the appropriate criteria of judgment need to be specified in order to provide a minimum degree of legal certainty. Charging an independent agency with the enforcement of the policy, subject to control by the courts, provides some assurance that powers will be exercised in a consistent way according to the statutorily defined criteria. A policy shift or an *ad hoc* deviation from the policy, motivated by political expediency, cannot be achieved simply and quietly by an internal ministerial instruction.

The foregoing paragraph touches on another important aspect of independent agencies: their value as a mechanism for ensuring transparency. In their areas of responsibility, their existence makes it difficult for the government to change the direction of policy without public announcement and debate. But they are also entrusted in most countries with an advocacy role in other policy areas. For example, the Bundeskartellamt has published opinions on the competition impact of German government proposals in the fields of energy policy, health insurance, and waste management. These opinions, unlike responses to interdepartmental consultations, are readily available to legislators and the public.

In spite of these advantages of independent agencies, there are circumstances in which governments can be tempted to try to exert an influence on them. Perhaps the most obvious possible motive for government

interference is political expediency. For example, if a foreign takeover of a large firm is politically so unpopular that the ruling party risks losing a significant number of votes, the government may try to influence the outcome of the merger control process. In other cases, the government may itself be captured by an interest group, either through corruption or as a result of asymmetric information, and seek to exercise its influence on behalf of that special interest.

These motives may lead to *ad hoc* government attempts to influence competition authorities in particular cases. If such attempts are successful, they introduce an element of inconsistency that undermines the credibility of competition enforcement and adds to the uncertainty of economic decision-making. However, it seems unlikely that such cases occur frequently enough, or are sufficiently foreseeable, to induce a government to select candidates for competition authority posts solely or mainly on the basis of their willingness to follow instructions.

The general ideological stance of the government may play a more important role in determining the choice of senior competition officials. Political parties may be hostile or lukewarm towards competition policy either because of *dirigiste* tendencies or because they adopt a *laissez-faire* attitude to the economy. The difficulty of changing the underlying legislation and institutional structure may lead such governments to prefer a more indirect and less transparent approach. A *dirigiste* government may, for example, try to enlarge the scope of the competition authority's interventions in order to conform to an ill-defined notion of public interest. In other cases, it may seek special treatment of a publicly owned corporation or a "national champion." A *laissez-faire* government, on the other hand, will favor a general reduction in the scope of intervention.

Today, all governments in developed countries lie in an ideological area between the most extreme forms of *dirigisme* and *laissez-faire*, where there is both general agreement about the market mechanism as the best means of achieving economic efficiency and a recognition that some form of competition policy is needed to safeguard this mechanism. Within this area there still remains considerable scope for differences of approach.

In the implementation of competition policy, the differences are revealed notably by the standard of proof required to justify a prosecution or a merger challenge and the degree of skepticism exhibited towards defense arguments, particularly arguments purporting to show the contestability of markets or efficiency gains.

It is probably unavoidable that governments will use their power over appointments to competition authorities to select candidates who are close to their own ideological position. Thus, Republican presidents in the United States and conservative ministers in Europe may prefer a candidate who takes a restrictive view of the need for enforcement action while U.S. Democrats and European social democrats may favor a more interventionist candidate. When personnel changes at the top of the competition authority reflect the ideological preferences of the government they can lead to changes in enforcement practice,

THE GENERAL IDEOLOGICAL STANCE OF THE GOVERNMENT MAY PLAY A MORE IMPORTANT ROLE IN DETERMINING THE CHOICE OF SENIOR COMPETITION OFFICIALS

creating a climate of uncertainty, even if the changes are to some extent predictable.

On the basis of a survey of antitrust lawyers and merger enforcement data for the period 1982-2007, Baker & Shapiro[15] conclude that significant fluctuations of this kind have occurred in merger control in the United States as a consequence of ideological shifts in the Antitrust Division of the US Department of Justice ("DOJ"). They argue that merger enforcement at the DOJ was significantly laxer during the second term of the Reagan administration and both terms of the George W. Bush administration than at any other time during the period covered. They find that these shifts in enforcement practice were much more pronounced at the DOJ than at the Federal Trade Commission ("FTC"), which also has merger control powers. However, unlike the DOJ, where the senior officials all change when there is a change of administration, the FTC has a bipartisan composition and each of the five commissioners is appointed for a fixed term not coterminous with a presidential term. Baker & Shapiro therefore argue that the observed variations in the practice of the DOJ are mainly attributable to political changes.

IT ALSO SEEMS LIKELY THAT THE RISK OF EXCESSIVE LAXITY IS GREATER THAN THAT OF OVER-REGULATION.

The courts can impose some limits on such fluctuations and, indeed, on more direct government interference. However, the effect of judicial review is asymmetric. When a competition authority challenges a merger or takes action against anticompetitive behavior, it is required to publish detailed findings and may, in many cases, need a court order to give effect to its decisions. The defendant firm has a strong incentive to contest a competition authority's finding. By contrast, when the authority decides to take no action or to accept weak commitments, customers—particularly if they are private consumers—have a much weaker incentive to challenge the decision because their interests are often too diffuse to justify risking significant sums on litigation concerning a single item of expenditure. Furthermore, any such challenge will be handicapped by an extreme asymmetry of information between the customers on one side and the defendant and the competition authority on the other.

THE COURTS CAN IMPOSE SOME LIMITS ON SUCH FLUCTUATIONS AND, INDEED, ON MORE DIRECT GOVERNMENT INTERFERENCE. HOWEVER, THE EFFECT OF JUDICIAL REVIEW IS ASYMMETRIC.

The considerations outlined above suggest that capture by government can undermine the credibility of a competition authority and the consistency of its enforcement practice. One means by which such capture can be achieved is through the government's power to appoint, or influence the choice of, senior officials. However, it seems probable that the effect makes itself felt more strongly through shifts in the general ideological stance than through direct interference in specific cases. It also seems likely that the risk of excessive laxity is greater than that of over-regulation.

III. RESOURCES

It is intuitively obvious that the effectiveness of competition policy must be related to the resources available for its enforcement, even if the empirical evidence is sketchy. As Tay-Cheng Ma[16] observes, "the competence

and credibility of the enforcing agency are highly dependent on the existence of adequate human and financial resources for monitoring, detecting, and proving violations so as to apply the law effectively."

It also seems reasonable to assume that the resources required by a competition authority are a function of the size of the country. However, it is unlikely that there is a simple linear relationship between the optimal resources of an authority and the country's size. An obvious reason for non-linearity is economies of scale. In addition there may be many country-specific factors that influence an authority's need for resources. These may include:

- The openness of the economy, which limits market power by making markets more contestable.

- The quality of the justice system: an overloaded or inefficient system will tie up more of the competition authority's resources.

- The existence of a firmly rooted "competition culture" and widespread respect for the law. Although these two qualities do not necessarily go together, both can ease the competition authority's load by reducing the prevalence of violations and by making them easier to detect and rectify.

- Membership of the EU or EFTA: interventions made by the European Commission or the EFTA Surveillance Authority may reduce the need for action at the national level.

- The relative pay of qualified economists, lawyers, and other skilled staff needed by competition authorities.

Table 1 (see Appendix) shows data on the budgetary and staff resources of a selection of competition authorities in developed countries throughout the world. Comparisons are rendered difficult by the fact that many of these authorities have tasks outside the antitrust field and only a few of them provide estimates of the share of their resources devoted to the latter. Furthermore, some authorities express their staffing data in full-time equivalents ("FTE") while others only provide the numbers of employees. In order to scale the data, three ratios are included in the table: agency budget/GDP, agency budget/population, and staff/population.

IT SEEMS THEREFORE THAT COMPETITION AUTHORITIES IN MANY COUNTRIES WERE NOT ONLY SHELTERED FROM THE WORLDWIDE TIGHTENING OF BUDGETARY DISCIPLINE DURING THIS PERIOD, BUT WERE EVEN ABLE TO EXPAND.

The table suggests that economies of scale are very important: there is an obvious contrast between the large countries and most of the smaller ones. Nevertheless, the variation between countries is surprisingly wide. For example, if we compare only single-purpose agencies and those multipurpose authorities that provide estimates of the share of antitrust in their resource use, we find that—relative to the size of the country—Norway has more than twice as many staff as the Netherlands or Switzerland and seven times as many as Austria. Given

that these are all relatively small countries, and even allowing for the fact that the Norwegian authority, unlike most of the others, provides only total staff numbers rather than full-time equivalents, these differences seem difficult to explain solely on the basis of economies of scale. Curiously, however, the Netherlands is the outlier in this group in terms of budgets. The mismatch between budgets and staff numbers is also evident in the case of Italy, where the budget is generous compared with other large countries but the staffing level is remarkably low.

In terms of staffing, the smaller countries mostly cluster around 10-15 per million population, with the exceptionally high level already noted in Norway and exceptionally low levels in Austria[17] and the Czech Republic. Authorities in the larger countries mostly have between three and six employees per million, those of France and Italy being comparatively understaffed.

Looking at the evolution of competition agency budgets between 2009 and 2012, we find quite significant reductions in the Netherlands, Slovenia, Spain, and the United Kingdom. In the Netherlands and Spain, staff numbers also fell, although there was a 13 percent increase in the combined staff of the U.K. authorities. Budgets increased more than 10 percent in the Czech Republic, Denmark, Germany, Japan, Norway, and Sweden. Staffing levels also rose significantly in Germany, Norway, and Sweden, as well as Finland, France, Switzerland, and the United States. It seems therefore that competition authorities in many countries were not only sheltered from the worldwide tightening of budgetary discipline during this period, but were even able to expand. This suggests a widespread belief in these countries that competition agencies had not yet reached their optimum size. It is also noteworthy that the new Competition and Markets Authority in the United Kingdom has a budget of £66 million for its first year of operation, an increase of about 100 percent in nominal terms compared with the combined budgets of the former Office of Fair Trading and Competition Commission in the financial year 2012-2013.

Table 2 (see Appendix) juxtaposes indicators of resources and an indicator of the perceived effectiveness of competition authorities (*Global Competition Review*'s star ratings). It reveals no clear relationship between the two and it is noteworthy that the higher ratings are all awarded to large countries, suggesting the possibility of some bias in the GCR approach. However, among the large countries, Italy stands out in having both a much low staffing level and a lower rating. Comparing the smaller countries, the Netherlands has the highest rating although five other countries have significantly higher staffing levels. On the other hand, as noted above, the Dutch competition authority has a remarkably generous budget. The Danish competition authority has the lowest rating in this list in spite of being relatively well resourced.

IT HAS BEEN SUGGESTED THAT THE MOST IMPORTANT INDICATOR OF STAFFING ADEQUACY IS NOT THE TOTAL EMPLOYMENT IN THE AGENCY BUT THE NUMBER OF LAWYERS AND ECONOMISTS

It has been suggested[19] that the most important indicator of staffing adequacy is not the total employment in the agency but the number of lawyers and economists. Where data are provided by the national reports to the OECD Competition Committee, they show that in most authorities lawyers and economists account for about 70-80 percent of the total staff. However, the proportion seems to be lower in larger authorities (about 44 percent in the Bundeskartellamt and about 50 percent in the two former U.K.

authorities). Unfortunately, France and the United States do not provide any information on this point. On the basis of the information available, the conclusions drawn from this table would not be altered by taking into account the number of economists and lawyers employed.

Given the wide disparities between the resources of national competition authorities and the interest of this question not only to the authorities themselves but also to the national finance ministries, more research on this subject would clearly be of immediate practical value.

IV. INDIVIDUAL SANCTIONS

Many observers[20] consider that the fines hitherto imposed on undertakings, although they show an upward trend, have not generally been high enough to have a strong deterrent effect. Connor & Helmers[21] note that fines on companies participating in international cartels usually represent a small percentage of the value of affected sales and that recidivism is widespread, suggesting that cartel sanctions have been an inadequate deterrent.

If the above conclusion is correct, there are three main ways in which sanctions can be strengthened:

- higher fines;
- easier private litigation; and
- sanctions against individuals as well as companies.

The strongest argument in favor of individual sanctions rests on the hypothesis that firms are unable to exercise effective control over the behavior of their agents, even if they have strong incentives to do so, such as high corporate fines. This may be particularly true in companies with dispersed shareholdings. Furthermore, the monitoring and incentives required to guarantee compliance by managers may be such as to discourage the legitimate exercise of managerial initiative. Recent revelations about the banking sector (the LIBOR scandal and allegations of exchange rate manipulation) tend to reinforce skepticism about the ability of firms to control their employees' behavior. It follows from this skepticism that an effective system of cartel deterrence requires that individual company executives be held legally responsible.

IT FOLLOWS FROM THIS SKEPTICISM THAT AN EFFECTIVE SYSTEM OF CARTEL DETERRENCE REQUIRES THAT INDIVIDUAL COMPANY EXECUTIVES BE HELD LEGALLY RESPONSIBLE.

The second argument in support of individual sanctions rests on the claim that, in order to act as an effective deterrent against anticompetitive conduct, fines levied on companies would have to be "impossibly high." Although the argument has been couched in terms of fines, the possibility of private litigation should also be taken into account.

According to the standard economic theory of deterrence,[22] the optimal level of the financial sanction (S) for an antitrust violation should be $S = H/\alpha$, where H is the harm to consumers and α is the probability of detection and conviction. The deterrent level of fine is therefore inversely proportional to α, which is generally assumed to be quite low (not above 0.2).[23] H is a function *inter alia* of the overcharge and the length of time over which the cartel operates. According to Connor & Helmers,[24] the median overcharge of international cartels is 25 percent and the mean may be as high as 30 percent, while they are thought to have a typical life of five to six years. Averaging scholarly studies of cartels operating during the period 2000-2009, Connor & Lande[25] calculate a median of 20 percent for national cartels and 25.8 percent for international cartels. The harm to consumers can therefore be very high relative to total sales in the affected market. The combination of a high level of harm with a low probability of punishment leads to the conclusion that fines must be very high in order to have a deterrent effect.

The claim that deterrent fines are "impossibly high" is based on the following arguments:

1. Such fines could exceed the existing statutory limits.

2. The fines (or fines plus private damages) would often exceed the companies' ability to pay, with resulting bankruptcies and reduction in competition due to the exit of firms.

3. The fear of very high financial penalties might induce firms to adopt inefficient financing structures with increased distribution of profits and a heavy reliance on debt in order to make themselves "judgment proof."

4. High financial penalties could harm the interests of "innocent" stakeholders, such as creditors and employees.
5. Financial penalties might be passed on to consumers in higher prices.[26]

The first problem is the least important, since the law can be amended to allow for higher fines. As far as the second argument is concerned, Buccirossi & Spagnolo[27] suggest that, if bankruptcy procedures are efficient, bankruptcy need not entail exit from the market. Even if exit does occur, they argue that the reduction of competition in one market could be a price worth paying for an economy-wide deterrent effect. The force of the other three arguments seems to be stronger, although it should be noted that "judgment proofing" entails costs that would enter into the firm's calculations of the net gain from participation in a cartel.

THE CONCLUSION FROM THE ABOVE DISCUSSION IS THAT THE CASE AGAINST RELYING ON CORPORATE FINANCIAL PENALTIES TO ACHIEVE DETERRENCE IS STRONG BUT NOT OVERWHELMING

Furthermore, it should be borne in mind that many of the participants in cartels are multi-product firms selling in many countries, while the scope of the cartels is usually limited to specific products and geographic markets. The turnover in the affected market may therefore be considerably less than the firms' total turnover and the risk that

a deterrent fine would exceed the ability to pay is consequently perhaps not as great as commentators such as Wils have suggested.

Buccirossi & Spagnolo[28] suggest that the size of the minimum deterrent fine can be greatly reduced if the probability of detection and punishment is increased by improving the design of leniency schemes as well as by introducing a system of rewards to encourage more firms and individuals to report offenses. Furthermore, by granting reductions of fines to firms that have "cheated" on a cartel, the authorities could increase the incentive to cheat, thereby reducing the harm to consumers and undermining the stability of the cartel.

IT APPEARS, THEREFORE, THAT CRIMINAL SANCTIONS AGAINST INDIVIDUALS MAY BE A SIGNIFICANT DETERRENT BUT THAT THEIR EFFECTIVE IMPLEMENTATION REQUIRES THE FULFILLMENT OF A NUMBER OF PRECONDITIONS

The conclusion from the above discussion is that the case against relying on corporate financial penalties to achieve deterrence is strong but not overwhelming. We now turn to the arguments in favor of imposing sanctions on individuals.

These sanctions may be administrative (fines or disqualification from exercising management functions) or criminal (fines imposed by criminal courts, imprisonment, community service orders). Table 3 (see Appendix) shows that national competition law makes provision for individual sanctions in a wide range of developed countries, although in some countries these provisions are not applied in practice.

IN VIEW OF THE WEAKNESSES OF THE OTHER TYPES OF INDIVIDUAL SANCTION THERE IS A GENERAL CONSENSUS THAT IMPRISONMENT IS MOST LIKELY TO BE AN EFFECTIVE DETERRENT

The risk of being personally penalized not only makes managers more reluctant to engage in illegal activity but also creates an incentive for them to report offenses to the authorities, if coupled with a leniency scheme. The increased risk of whistle-blowing by employees also adds to the incentives for companies themselves to report cartels.

The impact of sanctions against individuals depends on the type and severity of the penalty. Individual fines are probably the least effective since companies can find ways of compensating employees, even in countries where the law expressly forbids such indemnification. Fines imposed by criminal courts may be marginally more effective than administrative fines because of the stigma attached to a criminal conviction. Disqualification from directorships or other management functions may act as a deterrent because of its effect on career prospects. However, companies may find ways of compensating employees and even retaining them in influential positions, e.g. by giving them new job titles or engaging them as consultants,

In view of the weaknesses of the other types of individual sanction there is a general consensus that imprisonment is most likely to be an effective deterrent. The prospect of being incarcerated with "common" criminals is particularly daunting for those who have hitherto enjoyed a high social status while it is difficult for

companies to find adequate ways of compensating them for such an experience and for the stigma attached to a prison sentence.

However, there are disadvantages associated with criminal sanctions. Perhaps the most important is that the standard of proof is higher in criminal trials than in administrative or civil law. In English law this is expressed in the contrast between "beyond reasonable doubt" and "the balance of probabilities." In addition, the defendant enjoys enhanced rights, in particular protection against self-incrimination. A third problem is that prosecution in criminal cases often requires the approval of the public prosecutor's office and even the transfer of the case from the competition authority to the public prosecutor. As Wils[29] points out, prosecutors may lack expertise in competition law and be reluctant to accord priority to such cases when their case load also includes child abuse and manslaughter. When the case comes to court, the prosecutor may then face a non-specialist judge and a jury for whom the notion of an antitrust crime is a novel concept. Although these problems are not insurmountable, they lengthen the investigation and prosecution processes and make it necessary to decide at an early stage whether an investigation is to be carried out under criminal law or administrative law. Perhaps because of these difficulties, there has so far been only one criminal prosecution of individuals involved in a cartel in the United Kingdom although the possibility has existed since 2002.

IN ONLY TWO RECENT CASES HAVE GOVERNMENTS OPTED TO REDUCE THE SCOPE OF THEIR NATIONAL COMPETITION AUTHORITIES TO FOCUS MORE NARROWLY ON ANTITRUST ENFORCEMENT

Most of the problems outlined above do not apply to the United States, where the DOJ is both a competition authority and a public prosecutor and, where there is a long tradition of criminal prosecution of antitrust offenses. Perhaps because of this, the prosecution of cartel offences is widely regarded as more effective in the United States than in other countries. Wils quotes a staff member of the DOJ who asserts, "the threat of criminal prosecution in the United States has deterred a significant number of global cartels from extending their conspiracy into the United States." It is also noteworthy that the United Kingdom's only criminal cartel prosecution to date relied on a plea bargain struck between the defendants and the U.S. authorities.[30]

It appears, therefore, that criminal sanctions against individuals may be a significant deterrent but that their effective implementation requires the fulfillment of a number of preconditions, such as public acceptance of the notion that hardcore cartels are criminal conspiracies, a well-resourced prosecutor's office, prosecutors and judges with expertise in competition law, and close liaison between the competition authority and the prosecutor.

Fulfilling these conditions comes at a cost. The investigation procedure is also more costly than an administrative procedure, while the risk of a failure to achieve a conviction is greater. Further costs to be taken into account are the public expenditure on imprisonment and the loss resulting from withdrawing the offender from economic activity during the period of his/her sentence.

The above discussion shows that though the imposition of sanctions on individuals—imprisonment in particular—may strengthen deterrence it is not an easy option. Those countries that have not already embarked on this route may be well advised to consider first the possibilities for exploiting the potential of corporate liability more fully, as suggested by Buccirossi & Spagnolo.

V. MULTI-PURPOSE AUTHORITIES

Table 4 in the Appendix lists a sample of 26 national competition authorities throughout the world and shows their responsibilities outside the traditional field of competition policy. Only seven of these can be classed as single-purpose antitrust agencies (eight if we include the Antitrust Division of the U.S. Department of Justice). The most common additional functions of competition authorities lie in the fields of consumer protection, oversight of public procurement procedures, and regulation of network industries (public utilities). As the table shows, new competences were added quite recently in some countries (Italy in 2007; Finland, Netherlands, and Spain in 2013).

In only two recent cases have governments opted to reduce the scope of their national competition authorities to focus more narrowly on antitrust enforcement. In France, the *Autorité de la Concurrence*, which began work in 2009, combined the main competition enforcement responsibilities of the Ministry of Economy, Industry and Employment with those of the former Conseil de la Concurrence, leaving consumer protection with the Ministry. In the United Kingdom, a new Competition and Markets Authority ("CMA") came into being in April 2014. This authority combines the competition policy functions of the former Office of Fair Trading ("OFT") and Competition Commission ("CC"). Most of the consumer protection duties of the OFT were dispersed between several other bodies. However, the CMA retains some functions in this field as well as the appeal functions of the CC in matters concerning the regulation of network industries.

EVEN THOUGH COMPETITION POLICY MAY HAVE THE SAME ULTIMATE GOALS AS CONSUMER PROTECTION AND NETWORK INDUSTRY REGULATION, THERE ARE IMPORTANT DIFFERENCES BETWEEN THESE POLICIES IN THE CRITERIA USED TO JUSTIFY INTERVENTION AND IN THE METHODS AND TIMING OF SUCH INTERVENTION

In terms of their ultimate objectives, there are significant overlaps between competition policy, network industry regulation, consumer protection and, public procurement oversight. All of these policies are to a large extent concerned with consumer welfare. In relation to competition policy, there is a lively debate, mainly in the context of merger control, about whether total, rather than consumer, surplus is the appropriate objective.[31] Nevertheless, maximizing consumer welfare is more or less explicitly deemed to be the main concern of competition policy in almost all jurisdictions. The same is true, in principle, of consumer protection legislation and also of measures to ensure that public procurement is open and fair, if we consider the consumer as a taxpayer and take into account the potential spillover effects on consumer markets that can arise from distortions in public procurement markets. The regulation of network industries, with its focus on opening up markets and protecting consumers from the abuse of dominant positions, also places a strong emphasis on consumer welfare.

The following discussion concentrates on consumer protection policy and network industry regulation. The other functions performed by multi-purpose agencies, such as public procurement and state aid control, are much less resource-intensive and probably much less likely to give rise to conflicting priorities within a competition authority.

INDUSTRY CAPTURE MAY THEREFORE BE ONE CAUSE OF CONFLICT BETWEEN CONSUMER PROTECTION AND COMPETITION POLICY

Even though competition policy may have the same ultimate goals as consumer protection and network industry regulation, there are important differences between these policies in the criteria used to justify intervention and in the methods and timing of such intervention.

The following general features of competition policy enforcement contrast with the approaches of both consumer protection and network industry regulation:

1. Competition law lays down general principles, rather than detailed prescriptions, and the "rule of reason" approach is preferred to per se prohibitions.

2. Competition law is enforced on a case-by-case basis.

3. Except in merger control cases, competition authorities intervene only if there is evidence of an infringement of the law.

4. Competition authorities are responsible for policing the whole economy. They therefore lack specialized knowledge of particular sectors and tend to prefer structural to behavioral remedies.

5. As they have no continuous relationship with any particular sector, they are less prone to industry capture than sectoral regulators.

6. Competition policy aims to protect or enhance the welfare of consumers in general, rather than particular groups of consumers.

Consumer protection policy is concerned especially with preventing sellers from making fraudulent, unjustified, or misleading claims about their products and services; improving consumer information; and prohibiting the sale of dangerous products. The definition of minimum standards of information—in terms of honesty, the way products are described, and the amount of information provided—is often considered to be too complex to be decided on a case-by-case basis and may therefore be subject to detailed legislation or codes of conduct agreed between the consumer

AS A RESULT, REGULATORS HAVE RESPONSIBILITIES THAT COULD COME INTO CONFLICT WITH THE OBJECTIVE OF OPENING MARKETS TO COMPETITION, MOST NOTABLY BY BURDENING OPERATORS WITH OBLIGATIONS THAT COULD CONSTITUTE BARRIERS TO ENTRY

protection bodies and the suppliers. This may entail close ongoing interactions between the agency and the industries concerned, leading to a risk of capture. Indeed, Armstrong[32] notes, "in the 1950s and 1960s, the FTC often took a very expansive view of which adverts were misleading, and this was used to protect incumbent firms from new entrants."

Industry capture may therefore be one cause of conflict between consumer protection and competition policy. Even in the absence of capture, consumer protection measures may unintentionally increase barriers to entry to the detriment of competition in the market. Another cause of conflict may be, as Armstrong points out, that measures to protect the interests of vulnerable (e.g. less well-informed) consumers may have detrimental effects on other consumers, so that there may be no overall net benefit to consumers.

As far as network industry regulation[33] is concerned, the first priority is usually to open up previously monopolized markets to competition. In this respect, the objectives agree with those of competition policy. However, differences of approach arise from the special problems encountered in markets where there is a long history of monopoly control and government intervention, together with high sunk costs of entry and a natural monopoly element in part of the network. For example, regulators have to pay continuous, close attention to the conditions of access to the infrastructure and to consumers (i.e. to make it easy for customers to switch suppliers). They therefore need to have substantial sector-specific expertise and to maintain intense and continuous oversight over the regulated sectors. They may intervene directly in the price-setting process by imposing a cap on access charges or even, in some cases, on the prices paid by final consumers.

In addition to their market-opening tasks, network industry regulators are also expected to pursue social and environmental goals and to ensure security of supply. The social goals may include protecting vulnerable customers from denial of service in the event of unpaid bills or even cross-subsidizing low-income consumers and consumers in peripheral areas. The environmental goals include in particular the promotion of renewable energy sources. Although it could be argued that these objectives might be more efficiently achieved by direct government action through taxation, the social security system, and subsidies, the reality is that most countries have chosen a regulatory approach. As a result, regulators have responsibilities that could come into conflict with the objective of opening markets to competition, most notably by burdening operators with obligations that could constitute barriers to entry.

THE TRADE-OFF BETWEEN THE POLICY OBJECTIVES IS NOT NECESSARILY TRANSPARENT IN A MULTI-PURPOSE AUTHORITY.

It could be argued that multi-purpose authorities are an efficient means of resolving the possible conflicts discussed above since they bring together all the interested regulators in one organization, which is then obliged to decide on the appropriate trade-off. As suggested by the preamble of the Spanish law creating a new National Markets and Competition Commission ("CNMC"),[34] they also make it easier for officials in different policy areas to exchange ideas and information and pool their expertise, for example by seconding network regulators to a merger case team.

Sector inquiries, where the reasons for the malfunctioning of markets—and hence the nature of the potential remedies—are unknown at the outset might perhaps yield more fruitful results if conducted jointly by consumer and competition policy specialists. The Spanish law also points out that, compared with single-sector regulatory agencies, a body with economy-wide responsibilities is less prone to industry capture. Furthermore, multipurpose authorities may reduce costs to business by creating a "one-stop shop," while some savings in administrative overheads and other support costs are an additional benefit.

However, there are risks associated with such arrangements. First, the trade-off between the policy objectives is not necessarily transparent in a multi-purpose authority. This may be particularly important for the authority's advocacy role, i.e. when it is making policy recommendations or replying to a government consultation. When two agencies are involved, although the procedures are more cumbersome, they do allow the issues to be openly discussed. Second, decisions in cases where objectives or methods conflict may be influenced by the balance of power in the institutional structure. Since consumer protection and network regulation tend to be more resource-intensive and have a higher public profile they may come to dominate over competition policy. Third, this intra-institutional balance of power may unduly influence priority-setting and the allocation of resources.

In conclusion, if one believes that transparency of decision-making is an important determinant of the quality of decisions, and if one is concerned to maintain the integrity of competition policy enforcement, the safest option seems to be a single-purpose competition authority with freedom to comment on the policies of other agencies. However, a multi-agency system can work efficiently if the following conditions are in place:

1. The underlying legislation should make it possible to determine unambiguously in specific cases where the ultimate decision-making power lies.

2. There should be efficient inter-agency consultation procedures.

3. Information and know-how should be freely exchanged between the agencies, supported where necessary by arrangements for the secondment of staff.

VI. CONCLUSIONS

This article discusses four rather disparate questions, which were selected to illustrate the wide range of variation that still exists between national competition regimes in spite of a strong trend towards convergence. From the point of view of national policy-making, this diversity excludes the easy option of following an international consensus but offers the prospect, albeit with much more research, of gaining a clearer view of the major determinants of effectiveness.

2. THE QUESTION OF THE OPTIMAL RESOURCES NEEDED BY A COMPETITION AUTHORITY UNDER DIFFERENT NATIONAL CONDITIONS IS ONE THAT WOULD REWARD FURTHER RESEARCH

The tentative conclusions arising from the discussion of each of these questions can be summarized as follows:

1. Government power over the appointment of senior officials probably does not lead to a high risk of interference in specific cases. However, it could give rise to significant fluctuations in the general approach of the competition authority. One way of dampening these fluctuations might be to adopt the collegiate structure of the FTC in the United States, where members are appointed at different times as vacancies arise and there is a requirement for a political balance in the composition of the Commission. However, the latter condition would be difficult to achieve in countries with multi-party systems. Another possible solution is exemplified by Germany, where the president of the BKA is nominated by the government but has no decision-making power in individual cases.

2. As far as the resources of competition authorities are concerned, we observe very wide disparities, both in terms of finance and in terms of personnel. Beyond some indications that economies of scale may be very large there is no obvious explanation for these disparities, which may primarily reflect the relative political importance attached to competition policy in different countries. The question of the optimal resources needed by a competition authority under different national conditions is one that would reward further research.

3. Our third question asks whether the ability to impose sanctions on individuals, as well as companies, significantly enhances the effectiveness of competition policy enforcement. While the argument in favor of sanctioning individuals seems to be strong, there is a general consensus that the threat of imprisonment is the only individual sanction that is likely to be an effective deterrent. However, there are many obstacles to the effective criminalization of cartel offenses and the costs of imprisonment itself should not be disregarded. Before embarking on this route, countries should perhaps first consider whether the potential of corporate liability has been fully exploited.

4. Finally, we find that most countries have opted for multi-purpose rather than single-purpose authorities. Multi-purpose authorities offer some advantages in terms of the exchange of ideas and expertise, flexible use of resources, reduced administrative overheads, and “joined-up” decision-making. On the other hand, they present the risk that one policy area may come to dominate over the others in the allocation of resources, the definition of priorities, and the decision-making process. Where there are differences of approach or outright conflicts between policies, these differences should ideally be debated in an open and transparent manner, something that is less easy to achieve within a single agency than when responsibilities are separated. ▲

APPENDIX

Table 1: Budgets and staff of competition authorities, 2009 and 2012

Country	Budget Mio US$ at current prices and PPP	Budget/GDP millionths	Budget per head of pop. US$	Staff (italics denote FTE)	Staff/population millionths
Austria[1]					
2012	3.26	9	0.39	28	3.3
2009	2.85	9	0.34	32	3.8
Canada					
2012	41.49	28	1.19	*428.5*	*12.3*
2009	42.07	32	1.25	*420*	*12.5*
Czech Rep.[3]					
2012	11.02	38	1.05	*46*	*4.4*
2009	9.81	36	0.94	*44*	*4.2*
Denmark[3]					
2012	10.32	43	1.85	69	12.4
2009	7.74	36	1.40	68	12.3
Finland[1]					
2012	6.79	32	1.26	79	14.6
2009	6.41	33	1.20	67	12.6
France[1]					
2012	24.26	10	0.37	188	2.9
2009	22.50	10	0.35	175	2.7
Germany					
2012	34.39	10	0.42	*296*	*3.6*
2009	26.92	9	0.33	*277*	*3.4*
Italy[2]					
2012	78.03	38	1.31	106	1.8
2009	n.a.	n.a.	n.a.	n.a.	n.a.
Japan[2]					
2012	83.49	18	0.65	519	4.1
2009	73.20	18	0.57	513	4.0
Netherlands[3]					
2012	53.79	74	3.22	*132*	*7.9*
2009	59.54	87	3.61	*142*	*8.6*
Norway[1]					
2012	10.33	31	2.07	113	22.7
2009	9.38	35	1.95	104	21.7
Slovenia[1]					
2012	1.13	19	0.55	*18*	*8.8*
2009	1.46	27	0.72	*17*	*8.4*
Spain					
2012	18.64	12	0.40	187	4.0
2009	18.90	13	0.41	203	4.4
Sweden[2]					

2012	15.63	38	1.65	115	11.7
2009	14.07	48	1.52	109	11.8
Switzerland[1]					
2012	n.a.	n.a.	n.a.	*72.6*	*9.1*
2009	n.a.	n.a.	n.a.	*58.2*	*7.6*
UK[3 4]					
2012	47.27	21	0.74	*356*	*5.6*
2009	53.87	25	0.87	*315*	*5.1*
USA[3 4]					
2012	279.83	17	0.89	*1211*	*3.9*
2009	265.96	18	0.87	*1271*	*4.1*

Notes:

FTE = full-time equivalents

[1] Single-purpose competition authority.

[2] Multi-purpose authority, staff data are estimates of the part devoted to antitrust.

[3] Multi-purpose authority, both budget and staff data are estimates of the antitrust share.

[4] Combined data for two agencies with antitrust responsibilities.

Sources: Annual reports of competition authorities to OECD Competition Committee. PPP exchange rates from OECD StatExtracts, *Purchasing Power Parities for GDP*. Population data from Eurostat.

Table 2: Staffing levels and perceived effectiveness

	GCR stars 2013	**Staff/pop 2012**	**Antitrust budget/ GDP Millionths, 2012**
Large countries (>40 million pop)			
USA	5	3.9	17
Germany*	5	3.6	10
France	5	2.9	10
UK**	4.5	5.6	21
Japan	4.5	4.1	n.a.
Italy	3.5	1.8	n.a.
Smaller countries			
Netherlands	4	7.9	74
Norway	3	22.7	31
Finland	3	14.6	32
Sweden	3	11.7	n.a.
Switzerland	3	9.1	n.a.
Czech Rep.	3	4.4	38
Austria	3	3.3	9
Denmark	2.5	12.4	43

*Staff includes those employed in public procurement control.
** Average of OFT (4 stars) and Competition Commission (5 stars).
Sources: Global Competition Review, Rating Enforcement 2013. Other sources as Table 1.

Table 3: Sanctions against individuals in national competition law

Type of sanction	Countries
None	Luxembourg, Netherlands
Administrative fines	Germany
Criminal fines	Australia, Canada, Estonia, Greece, Ireland, Israel, Japan, Norway, U.K., U.S.
Imprisonment	Australia, Canada, Estonia, Ireland, Israel, Japan, Norway, U.K., U.S.
Criminal sanctions for bid-rigging only	Austria, Germany
Criminal sanctions provided for but not applied	Cyprus, France, Slovakia
Disqualification of directors	Australia, U.K.

Table 4: Responsibilities of national competition authorities

Country	Competition authority	Responsibilities outside core competition policy (Antitrust)
Australia	ACCC	Consumer protection, regulation of network industries
Austria	BWB	None
Belgium	ABC/BMa	None
Canada	Competition Bureau	Consumer protection
Czech R.	UOHS	Public procurement procedures, state aid
Denmark	KFST	Consumer protection, public procurement, regulation of water sector
Finland	KKV	Consumer protection (since 2013)
France	Autorité de la Concurrence	None
Germany	BKA	Public procurement procedures
Hungary	GVH	Consumer protection
Ireland	Competition Authority	None
Italy	AGCM	Consumer protection (from 2007), conflict of interests (from 2004)

Japan	JFTC	Consumer protection, protection of SMEs (subcontracting)
Korea	KFTC	Consumer protection, protection of SMEs (subcontracting)
Netherlands	ACM	Consumer protection (from 2013), regulation of network industries
Norway	KT	None
Poland	UOKiK	Consumer protection, state aid
Slovenia	Competition Protection Agency	None
S. Africa	Competition Commission	None
Spain	CNMC	Regulation of network industries (from 2013)
Sweden	KKV	Public procurement procedures
Switzerland	COMCO	Public procurement procedures
Taipei	FTC	Subcontracting
UK	CMA	Consumer protection, appeals on network industry regulation
USA	FTC	Consumer protection
	DoJ	Antitrust division has no other functions

[1] Formerly Head of Section (Competition Policy), Directorate of Economic and Financial Affairs, European Commission. Thanks are due to Pierre-André Buigues for very helpful comments.

[2] P-A Buigues & R. Meiklejohn, *National Competition Authorities in France, Germany, and the United Kingdom: Resources, Independence, and Enforcement*, 8(1) CPI Antitrust Chron. (August 2013).

[3] M. Krakowski, *Competition Policy Works: The Effect of Competition Policy on the Intensity of Competition – An International Comparison*, Hwwa Discussion Paper 332, Hamburg Institute of International Economics (2005).

[4] For example, M.A. Dutz & A. Hayri, *Does more intense competition lead to higher growth?*, World Bank, Development Research Group, Research Working Paper No. 2320 (APRIL 2000). Much more nuanced results are obtained by Tay-Cheng Ma, *The effect of competition law enforcement on economic growth*, 7(2) Competition L. & Econ. 7(2), 301-334 (2011).

[5] S. Voigt, *The Economic Effects of Competition Policy – Cross-Country Evidence Using Four New Indicators*, Icer Working Paper No. 20/2006, International Centre for Economic Research, Torino, 2006.

[6] *Supra* note 4.

[7] P. Buccirossi et al, *Competition Policy and Productivity Growth: An Empirical Assessment*, Lear Research Paper (May 2012); Laboratorio di economia, antitrust, regolamemtazione, Rome, (May 2012), and *Measuring the deterrence properties of competition policy: the competition policy indexes*,7(1) J. Competition L. & Econ. 165-204 (2011).

[8] The study does not consider the separate effect of resources but uses an indicator whose value is largely determined by them.

[9] KPMG, *Department of Trade and Industry, Peer Review of Competition Policy* (06 June 2007), *available at* http://webarchive.nationalarchives.gov.uk/20121126080325/http://www.berr.gov.uk/files/file39863.pdf. The respondents were officials of competition authorities, businesses, competition lawyers, and economists. The two most important factors were considered to be technical competence in terms of legal and economic analysis.

[10] G. Stigler, T*he Economic Theory of Regulation*, 2(1) Bell J. Econ. 3-21 (1971).

[11] In Canada, the Governor-General.

[12] Autorità Garante della Concorrenza e del Mercato.

[13] Indeed, some observers consider that "there is a high level of political interference in the Italian regime": KPMG (2007), *supra* note 9.

[14] S. Voigt & E. Salzberger, *Choosing Not to Choose: When Politicians Choose to Delegate Powers*, 55(2) Kyklos, 289-310 (2002).

[15] J.B. Baker & C. Shapiro, *Detecting and Reversing the Decline in Horizontal Merger Enforcement*, 22 (3) Antitrust (Summer 2008).

[16] *Supra* note 4.

[17] The European Commission notes in its recommendation on Austria's 2014 national reform program that "Despite increases in the budget of the Austrian Federal Competition Authority, it remains significantly understaffed in comparison to the authorities of other Member States of a similar or smaller size." COM (2014), Brussels, 2 June 2014.

[18] Estimated share of competition enforcement.

[19] *See* Buccirossi et al., *supra* note 7. This is also implicit in the OECD Competition Committee's standard format for national annual reports and in the GCR rating procedure.

[20] See W.P.J. Wils, *Is Criminalization of EU Competition Law the Answer?* 28(2) World Competition 117-159 (June 2005). Much of the discussion in this section is based on Wils.

[21] J.M. Connor & C.G. Helmers, *Statistics on Modern Private International Cartels*, Aai Working Paper, No.07-01, American Antitrust Institute (10 January 2007). See also J.M. Connors & R.H. Lande, *Cartels as Rational Business Strategy: Crime Pays*, 34(2) Cardozo L. Rev. (December 2012).

[22] G. Becker, *Crime and Punishment: An Economic Approach*, 76(2) J. Pol. Econ. 169-217 (1968).

[23] *See* Wils, *supra* note 20. The perceived probability of punishment may be even lower than the real probability if managers over-estimate their ability to evade detection.

[24] *See* Connor & Helmers, *supra* note 21.

[25] *Supra* note 21.

[26] There is some evidence of a "sunk cost bias" amongst firms that leads them to price according to average rather than marginal cost. The finding that cartel participants do not usually lower their prices after

being fined is consistent with this. *See* P. Buccirossi & G. Spagnolo, *Optimal Fines in the Era of Whistleblowers. Should Price Fixers still Go to Prison?* Lear Research Paper 05-01, Laboratorio di economia, antitrust, regolamentazione, Rome (12 December 2005).

[27] *Id.*

[28] *Id.*

[29] *Supra* note 20.

[30] Office of Fair Trading, *Three imprisoned in first OFT criminal prosecution for bid-rigging*, Oft Press Releases, 72/08, (11 June 2008).

[31] For an overview of the arguments with references to the literature, see European Merger Control: Do We Need an Efficiency Defence?, Ch. 2 (F. Ilzkovitz & R. Meiklejohn, eds. 2006).

[32] M. Armstrong, *Interactions between Competition and Consumer Policy*, 4(1) Competition Pol'y Int'l (Spring 2008).

[33] For a discussion of differences between antitrust and network industry regulation, *see* P.-A. Buigues & R. Meiklejohn, *European Integration and Network Industries*, International Handbook on the Economics of Integration, Vol. II (M.N. Jovanović, ed. 2011).

[34] Ley 3-2013 of 4 June 2013, Boletín Oficial del Estado Núm 134, 5/6/2013. English translation *available at* http://www.cncompetencia.es/Inicio/Legislacion/NormativaEstatal/tabid/81/Default.aspx (consulted 15/5/2014).

[35] For example, the Competition Commission expressed the opinion that the practice of giving sectoral regulators concurrent powers to enforce competition law has not worked well in the United Kingdom. *See* Department for Business, Innovation and Skills (UK), *Responses to BIS Consultation: A Competition Regime for Growth* (15 March 2012).