Choosing among American, European, or no antitrust at all

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Abstract

We use the theory of law enforcement to analyze why some countries have antitrust policies and others don't; and also, why some countries choose to enforce some antitrust domains using common or civil law as in America, while others resort to the administrative process as in Europe. We conclude that there is not a unique antitrust that fits all countries and policy domains. There is no need of antitrust in countries and policy domains where institutions of law enforcement are too weak. For moderate level of institutional strength, it is better to use ex-ante authorizations such as cartel registrations and competition restrain authorizations. For an intermediate level of institutional strength, it might be better to have an ex-post judiciary regime of common or civil law litigation based on the rule of reason to protect private parties from negligent conducts that end up restraining competition. But, at that level of institutional strength, an ex-post administrative negligence system of the European type dominates when encouraging all firms to comply with a legal standard is not socially desirable. Finally, when institutions are very strong, it is optimal to have an ex-post strict liability regime of litigation able to hold liable firms that engage in what are defined as per se illegal competition restrains as in the cartel cases in the US.

1. Introduction

Antitrust policy has been introduced across countries in the world very gradually. Canada passed the first antitrust statute in 1889. The US has an antitrust policy

that dates back to the Sherman Act of 1890, while most European countries have antitrust policies only since the mid twentieth century. Other countries have only adopted an antitrust regime much more recently as part of their convergence towards more market oriented polices (South-Eastern Asia and Latin America), or towards regional agreements (such as the countries of Eastern Europe towards the EU), or towards multilateral agreements (such as those embraced by the members of the WTO after the Uruguay Round).

Antitrust regimes differ also strongly across countries. Most of the antitrust regimes, particularly the European ones, are enforced within the boundaries of each administrative law. Some other countries, such as the US, enforce antitrust using not only the administrative process, but mostly using common law.

Additionally, antitrust differ also strongly across policy domains within each country. For instance, in the US some domains of antitrust enforcement are placed within the boundaries of criminal law, such as price agreements among competitors that are *per se illegal* and some kind of monopolization intents. Other domains such as agreements among competitors and unilateral restrictive practices that qualify as unfair may be scrutinized under administrative law (they can be brought before the Federal Trade Commission), but usually are scrutinized under tort law (before the judiciary).

In Europe, most antitrust domains are enforced under administrative law. Agreements among competitors and unilateral restrictive practices are usually challenged by governments using the administrative process. And once a practice is deemed to be illegal by the administrative authority, only then remedies are claimed before the civil jurisdiction.[1]

This paper aims to explain why some countries enforce antitrust policies, and others don't; and also, why some countries choose to enforce some antitrust domains using common law, while others resort to the administrative process in most antitrust domains. We conclude that there is not a unique antitrust that fits all countries and policy domains. There is no need of antitrust in countries and policy domains where institutions of law enforcement are too weak. For moderate level of institutional strength, it is better to use ex-ante authorizations such as cartel registrations and competition restrain authorizations. For an intermediate level of institutional strength, it might be better to have an ex-post judiciary

[1]Most European legislations require negligence or intention in non-contractual damage actions. Negligence is pressumed where a violation of the competition law is already shown. This is why in Europe most private actions are undertaken once a practice has been qualified as illegal through an administrative procedure. See Ashurst (2004) comparative review.

regime of common or civil law litigation of the American type based on the rule of reason to protect private parties from negligent conducts that end up restraining competition. But, at that level of institutional strength, an ex-post administrative negligence system of the European type dominates in policy domains where encouraging all firms to comply with a legal standard is not socially desirable. Finally, when institutions are very strong, it is optimal to have an ex-post strict liability regime of litigation that it is able to hold liable firms that engage in what are defined as per se illegal competition restrains as in the American type of antitrust for cartel cases. We also show that cross-country experiences a cross-domain differences on the existence and enforcement of antitrust is consistent with the theory of law enforcement.

The paper is organized as follows. Section 2 reviews the literature that has tried to explain the drivers of the existence and effectiveness of antitrust policy. Section 3 applies the theory of law enforcement to the antitrust case analyzing the menu of control strategies, and why different enforcement strategies might be optimal in different settings. Section 4 concludes discussing how our analysis applies to the recent reform in EU antitrust law outlined in the modernization package that came into force in 2004, and to what extend there is not an antitrust policy which will fit all countries setting up or reforming their antitrust regimes in the process of policy harmonization within the EU and WTO.

2. Explaining the drivers of the existence and effectiveness of antitrust policy

Neither standard public interest theories (market failure perspective on public goods and externalities), nor public choice perspectives (regulatory capture theory) are able to explain what are the drivers of the existence of antitrust and the effectiveness of competition policy across countries and policy domains.

Public interest theories focus on the question of whether competition sustains itself, and also when collusion and monopoly arises naturally putting at risk not only economic efficiency and welfare, but also economic and political freedom which might qualifies as a backbone "public good" of developed societies. From this point of view, when competition is not self-sustainable, there is a justification for a public action to redress the 'market failure', and to make the market forces work again whenever competition can be restored.

Politicians acting as benevolent policy makers would eventually pass antitrust laws responding to the benefits that consumers as a large and dispersed group

of citizen ought to gain from a more competitive regime. From this perspective, the objective of antitrust is twofold: establishing a competitive order to safeguard economic and political freedom, and also to enhance economic welfare. Stiglitz (1994) advocates for a "new view" on competition policy based in the following three premises: (1) there are a variety of market imperfections; (2) in imperfectly competitive environments, firms engage in practices that either facilitate collusion or restrict competition; (3) welfare losses from restrictive practices are large. From this point of view, there is a justification to antitrust. This view is quite similar to what Kwoka and White (1999) referred as "post-Chicago" competition economics aimed to redress market failures.

The public choice literature explains why some countries have antitrust policy while others don't as the equilibrium outcome between demand and supply in the political arena. Stigler (1971), Posner (1974) and Becker (1983) developed the analytical framework that made politicians and bureaucrats endogenous actors taking public decisions regarding regulation. From this point of view, when competition fails, legislations allows the regulator to trade regulatory rents in a market for regulation and political power. The colluding or monopoly industry can capture the regulator in its own benefit because the industry is able to become more organized than general interests to pressure and obtain favorable regulations. From this perspective, competition policy ends up being a part of 'an interventionist industrial policy' (Neuman 2001), or as Stiglitz (1994) highlights competition policy can have deleterious effects such as being used to limit competition itself by firms worried about the competition threats of another firms.

According to Stigler (1971), Posner (1974 and 1975) and McChesney (1987) regulations result from the pressure of producers and bureaucrats on politicians. This perspective has been used to explain the pressure of some industries in favor of antitrust. Using the evidence from the letters of Senator John Sherman, Troesken (2002) corroborate Stigler (1995) interpretation that small firms (specially, small oil refineries) were the dominant interest groups supporting antitrust legislation because they were threatened by the ability of the trust to use more efficient technologies and to exploit economies of scale (a thesis sustained also by Grandy 1993 and Libecap 1992).

According to Glaeser and Shleifer (2003), capture theories argue that "producers either water down regulation to render it irrelevant, or else subvert it for their own benefit, such as raising prices. Bureaucrats, in turn, use regulation to enhance their budgets or bribes": for instance, by pressing for making illegal the practices of their more efficient competitors. All agents take part in the market of

political rents: politicians, bureaucrats, firms, consumers. All of them maximize profits in terms of votes, welfare, income or utility. The capture theory focus on the subversion in the stage of creating a new rule, but it then assumes that once regulations are in place, the government can enforce them using the necessary funds. Aghion and Schankerman (2004) use a political economy model to show how special interest groups can capture politicians and lead an economy into a low-competition trap in which politicians are successfully bribed by high-cost firms to maintain low competition.

However, this analysis is unable to explain why a policy such as antitrust, that usually benefits a large and dispersed set of consumers, is finally passed in many countries against the interests of local monopolies and colluding industries. Coase (1960) shows that regulatory economics in the public interest literature had failed because it did not take into account that the courts might be able to settle the problems related to the "public bads", and because it did not analyze when regulation is truly necessary. Coase (1960) showed that externalities had a bidirectional nature and, therefore, optimal policies depend on the transaction costs of reaching an agreement between those who cause the damage, and those who suffer it. If transaction costs were not too high, those who cause the damage could compensate those who suffer it, and we could reach efficiency without government intervention. When the judiciary allocates liabilities in the right way, market forces and incentives might lead to efficient solutions.

This perspective is used by Posner (1998) and Shavell (1984) to discuss the relative efficiency effects of litigation versus regulation; it is used by Glaeser and Shleifer (2003) in the paper on why regulation raised during the *Progressive Era* at the beginning of the twentieth century in the US. Glaeser and Shleifer (2003) explain the rise in regulation using a model of law enforcement which shows which is the optimal control strategy for reducing damages to third parties: liability for accidents, regulation of precautions, a combination of the two, or doing nothing.

In this paper we use the theory of law enforcement developed by Glaeser and Shleifer (2003) to analyze which is the better antitrust regime taking into account the different strategies available to enforce antitrust law: ex-post liability using the administrative process, civil or common law litigation, or even criminal prosecution to make firms that cause social damages by restraining competition accountable and liable for their actions; ex-ante regulation (authorization of firm agreements and firm conducts that could potentially restrain competition); or doing nothing. The model we present is able to account for what Aghion and Schankerman (2004) identifies as one of the keys for explaining low-competition

traps: the failure of political institutions to effectively discipline the behavior of politicians and bureaucrats.

3. Antitrust control strategies

There are two main control strategies to enforce antitrust law: the first strategy is **preventive regulation** that imposes the firms to disclose and get permission to the competition authorities to proceed with a multilateral agreement or unilateral conduct: for example, permission to reach agreements with competitors or permission to a dominant firm to price discriminate or impose exclusivity onto its dealers; the second strategy is **litigation:** for example, to let firms to proceed with their multilateral agreements or unilateral conducts and then to subject any potential restrain to competition to the scrutiny of the justice or a quasi-judicial government agency under a system of monetary penalties and damages, or alternatively under a system of criminal penalties.

When competition practices are subject to preventive antitrust regulation, the law sets the legal standards under which conducts shall be disclosed and authorized in order to reach some political objectives, usually to enhance social welfare, or more generally to protect the public interest. Usually, the law confers to an administrative authority the duty to control conducts and to impose penalties to those who do not satisfy the disclosure and behavioral requirements, or to sue infractors before the judge.

When competition practices are subject to ex-post litigation, what the law establishes is a set of rights and liability rules that may be claimed before a judiciary body under tort law, civil law, or even criminal law. Alternatively, the law may set the standard under which conducts qualify as illegal. Illegality may be then be claimed ex-post before a government agency under the administrative process. Within the ex-post litigation strategy, the objective is to generate the incentives and the restrictions on private conducts in order to deter firms to cause social damage.

Within the tort law and civil law, processes are aimed to show the cause or the fault that led to damages to private parties, and to make those who cause the damage accountable and liable for their actions, and to impose them penalties and remedies (for instance, treble damages). The judiciary is better suited to protect consumer surplus losses and make firms accountable for them. By the contrary, administrative bodies are mandated to assess to what extend firms actions are against the legal standard set to protect total social welfare, or more generally to

protect the public interest. Government bodies are empowered to trade-off private damages and social gains by qualifying a potentially restrictive practice as legal whenever there is a net public gain.

On the other hand, while government agencies are better armed to balance private damages and public gains, the problem is that placing antitrust in hands of government agencies also increase the discretionary power that can be used by politicians and bureaucrats on their own benefit. In this case, government failure is more prone to arise. Independence of the competition authorities from political and bureaucratic control, giving the administrative bodies in charge of antitrust a quasi-judiciary character, and making the rules and legal mandates governing the antitrust negligence regime more clear and stable over time moderates the inherent risks of government discretion. This paper is not going to take into account the inherent risks related to administrative discretion when discussing which is the better control strategy. The question of whether judges or regulators are better at enforcing laws or contracts is discussed in Glaeser, Johnson and Shleifer (2001). This papers focus, instead, on how the ex-ante regulation, ex-post administrative litigation and ex-post judicial litigation are suited to stand before the risk of law subversion.

When competition practices are subject to ex-post litigation, the law details when damages are caused by *negligence* or by *strict liability.* In the domains of antitrust, we might qualify as negligence any case when firms engage in a forbidden practice causing damages without taking some precautions mandated by the law. Plaintiff needs to show fault or negligence. We might qualify as *strict liability* when firms engage in a forbidden practice causing damages to third parties no matter the precautions the firms had taken. Plaintiff just needs to show cause.

Glaeser and Shleifer (2003) show which of the two types of control strategies, ex-ante preventive regulation or ex-post litigation, is better in different institutional settings using the example of the strategies for preventing industrial and railroad accidents such as the ones that occurred during the early industrialization in the US by late nineteen century. We apply their model to analyze how to prevent damages caused by competition restrains, and we extend the model to include an ex-post administrative regime of negligence.

3.1. Menu of control strategies

The menu of control strategies in antitrust is the following:

1. **Doing nothing**: do not have any antitrust prohibition, nor rules about the way firms should proceed in case their practices risk to be qualified as a competition restrains, nor single or block authorization procedures, nor damages, nor penalties.

2. **An ex-ante regime of authorizations**: firms that engage in a competitive practice – i.e. a multilateral price agreement or price discrimination – that is defined by administrative law should disclose their action and get authorization from a government agency to make their practice legal. At the same time, the law creates a watchdog to monitor firms conducts and to impose penalties, or sue the firms before the judiciary which in turn can impose penalties, on all firms that do not comply with the precautions that the authorization regime imposes. The early cartel policy in Britain and Spain was based on a regime of cartel registration. This regime was the one in force in the EU until 2004 with respect to some agreements between firms. Firms engaging in subset of agreement may ask ex-ante for an authorization.. Since 2004, firms can proceed with their agreements and should only be accountable ex-post on whether the agreement is exempt from the general prohibition before the European Commission or Member State Courts. Mergers around Europe, in the EU and in the US are scrutinized under ex-ante authorization regime.

3. **An ex-post judiciary regime of negligence**: government agencies, and those business and consumers damaged by a competition restrain, can sue the firms causing a competition restrain before the judiciary. Justice is in charge of analyzing to what extend a restrain has caused private damage, to adjudicate fault or negligence. In that case, justice imposes penalties and remedies only on those firms that had not take some mandated precautions. This regime corresponds to the regime of illegality under the rule of reason criteria in the US. Competition restrains are deemed illegal only when firms have not taken some precautions outlined by tort law. And, only those firms engaging in restrains that qualify as illegal have to pay penalties and remedies.

4. **An ex-post administrative regime of negligence**: an administrative body may be compelled to analyze to what extend a firm conduct is restraining competition (first step) and whether such restrain do qualify as illegal (second step). In this first step, the government agencies should take into

account whether the firm has taken a set of precautions that the law outlines or not. Government agencies should adjudicate fault of negligence. In case the firm has not taken precautions, the conduct is qualified as a potentially harmful. In a second step, the competition authority assesses whether there is a trade off between the cost the practice imposes and the benefits it also causes. If the costs are larger than the benefits, the competition restrain qualifies as a practice illegal. Only if the restrain qualifies as illegal, third parties claim remedies before the judiciary. As in the previous negligence regime, adopting the precautions contained in the law, allows firms not to pay penalties nor remedies. This is the type of negligence in force in most European countries and in the EU.

5. **An ex-post strict liability regime**: government agencies, and also business and consumers damaged by a competition restrain, can sue the firms directly before the courts in tort law, civil law or even criminal law processes. If the judiciary finds a practice that according to the law is a restrain of competition, the firms or managers that engage in a competition restriction should always pay penalties and remedies. It does not matter whether the firms took precautions to avoid some of the damages the practice causes. Retrains are per se illegal, and neither an administrative body nor the judiciary should analyze to what extent firms or managers took precautions to lessen the damages of the restrain. Justice should just adjudicate cause. The enforcement body should only focus on clarifying whether firms engaged in per se illegal restrains or not (finding the 'smoking gun'). When a practice is qualified as per se illegal, there is no way the firms or managers can escape to pay penalties and remedies. This regime corresponds to the regime of *per se* illegality of hard core cartels in the US.

3.2. Subversion

The public control, whether it is in hands of an administrative body or the judiciary, is always vulnerable to subversion. Firms may use legal tactics to avoid paying penalties or remedies delaying the legal procedures, or even using illegal tactics such as intimidation of judges or competition authorities, or even bribes.

Ex-ante preventive regulation imposes always larger private costs because all firms should disclose their competitive strategies to the competition authority and should also modify their competitive conducts to adjust them to the legal standard. Mandated disclosure and legal standards imposed by regulation to

some conducts are sometimes completely useless because they do not reduce the probability that the firms conducts end up causing damages to third parties. In these cases, the ex-ante authorization regime of competitive practices generates private costs and no social benefits at all.

On the other hand, ex-ante authorization regimes are less vulnerable to subversion. The key issue is that regulation such an ex-ante authorization regime can be enforced by imposing small penalties that have to be paid with a high probability by those who do not disclose competition restrains.

On the contrary, ex-post litigation imposes smaller private costs because only those firms for which preventive actions do reduce the probability of causing damage to third parties will eventually modify their conducts. For making firms sensible to the damage that they might cause, it is only necessary to set large penalties and remedies to protect the interest of the third parties affected by firms conducts (that is the Becker rule, 1968, *boil them in oil*). The problem is that litigation is more efficient, but large penalties and remedies promote firms to subvert justice. Let's analyze this trade off in detail.

3.3. Minimum efficient penalties and damages

When firms engage in a risky competitive action, they may adopt two levels of precautions, $q_1 < q_2$. In antitrust, precaution means that firms modify their conducts in order to make their competitive action to get it authorized ex-ante or to make it qualify as legal ex-post.

The precaution level q_2 has a cost per unit of output of C, while q_1 is free. So, total costs of taking precautions equal $S \cdot C$, where S is the scale of production of the firm. There are two type of firms which may cause a competition restrain: type A firms, and type B firms. For A firms, taking the high level of precaution q_2 does not reduces the probability of causing damages to third parties when engaging in a competitive action, P_A. Therefore, it is socially inefficient that this type of firms take a high level of precautions. For instance, this is the case of such agreements between firms aimed to promote cooperation in activities that have positive externalities (such as R&D), but that do not foreclose future competition in the market. Making the firms to engage in a agreement that restricts cooperation in order to fulfill an ex-ante authorization regulation or in order to make their agreement to qualify to an ex-post legal standard of liability has private costs, and do no have social gains. This is also the case for exclusivity clauses imposed by dominant firms that do promote quality and post-sales services without imposing

competition restrains.

On the contrary, for type B firms taking the high level of precautions reduces the probability of causing damages to third parties when engaging in arrangements with their competitors: $P_{B1} > P_{B2}$, where P_{B1} is the probability of causing damages in the case the firms take the low level of precautions, and P_{B2} is the probability of causing damages in the case the firms take the high level of precautions. Therefore, it might be socially efficient that type B firms take the high level of precautions. In the antitrust arena, taking the high level of precautions means that the firms spend time and money modeling their multilateral agreements with competitors or their unilateral actions in such a way that the action of restraining competition would eventually not be qualify as a legal restrain. Restrains impose damages to third parties per unit of output of D. Total damages of restrains are therefore $S \cdot D$. And then, it is socially efficient that type B firms take the high level of precautions when $(P_{B1} - P_{B2})D > C$.

In the preventive regulation control strategy, the ex-ante regime of authorizations in the antitrust arena, the probability that the competition authority detects that a firm is engaging in a competitive restrain taking a low level of precautions is p. Let's assume that $p > P_{B1}$, that is the ex-ante authority control is effective and simple to enforce. The probably of detection is high in the merger cases, but might eventually be less so in the multilateral or in the unilateral competition restrains. Detection can be relatively inexpensive and certain if the competition law mandates the disclosure of potential competition restrains such as price agreements, price discriminations, or exclusionary clauses. That was the case for instance in the early competition regimes in the UK (Symeonidis 2002) and Spain (Borrell 1998) which did not outlawed cartels but mandated their registration. And, as Glaeser and Shleifer (2003) point out 'some regulations are designed to encourage third-party enforcement.' For instance, consumers might complain when firms tier their sales, competitors might report price fixing agreements under leniency programs, and so on. Third-party enforcement makes it plausible that monitoring whether firms are taking precautions or not has low costs.

Let us also assume that sales are given and are not affected by the control strategy, S is exogenous to the problem, and let us also assume that $(P_{B1} - P_{B2})D > C$ and, therefore, it is socially efficient that type B firm take a high level of precautions, and that firms minimize the sum of costs of precaution and the expected fine.

When there is not problems of enforcement, the minimum fines or damages are the following:

3.3.1. An ex-post strict liability regime

Let us set the fine for forcing type B firms to prefer q_2, the high level of precaution, to q_1, the low level of precaution. For those firms the cost of modifying their competitive strategies to avoid third party damages is the expected value of the fine or remedies that have to pay in case their competition strategies finally cause social harm, $P_{B1}M$, when M is the fine or remedies to be paid in case of competition restrains. The cost of taking a high level of precaution in their competitive strategies is the expected value of adopting precautions (SC) plus the fine or remedies that have to pay in case finally the competition restrain causes social harm even when precautions have been taken, $SC + P_{B2}M$. Type B firms will adopt the high level of precautions only

when,

$$P_{B1}M > SC + P_{B2}M.$$

Therefore, the minimum fine that forces type B firms to adopt the high level of precaution is,

$$M > \frac{SC}{P_{B1} - P_{B2}}.$$

Irrespective of the amount of the fine, type A firms never take the high level of precaution because modifying their competitive strategies do not reduce the probability of causing social harm. The cost of adopting a high level of precaution, $SC + P_AM$, is always larger than adopting the low level of precaution, P_AM. Additionally, it is not socially efficient that type A firms change their behavior.. Taking precautions has private costs to type A but it has no social benefits.

3.3.2. An ex-post negligence regime

In this regime, let us force again type B firms prefer q_2, the high level of precaution, to q_1, the low level of precaution. Like in the previous case, the cost of adopting the low level of precaution (q_1) is the expected value of the fine or remedies to pay in case that the firm effectively causes social harm, $P_{B1}M$. However, now the cost of adopting the high level of precaution (q_2) is only the expected value of the cost of taking precautions (SC). In case of competition restrains that cause social harms, those firms that had adopted the high level of precautions do not have to pay fines or remedies because the restrain will qualify as legal or will not

qualify as being against the public interest given that a high level of precautions was taken. Type B firms take the high level of precautions when the following inequality is satisfied,

$$P_{B1}M > SC.$$

Therefore, the minimum fine that force type B firms to take the level of precautions socially desirable is,

$$M > \frac{SC}{P_{B1}}.$$

In the case of type A firms, we want fines that force firms to take a low level of precaution. We want the cost of taking a low level of precautions, $P_A M$, to be smaller than the cost of adopting the high level of precaution, SC. That is,

$$P_A M < SC.$$

Therefore in the ex-post negligence regime, there exist a upper limit of fines which should not be exceeded for not generating perverse incentives for type A firms:

$$M < \frac{SC}{P_A}.$$

The problem is that there are a range of values P_A and D for which the negligence regime is not optimal. For this range of values that we will discuss below, the minimum fine to make the negligence regime work would be larger than the upper limit which make the fines not to generate perverse incentives for type A firms.

An ex-post negligence regime might impose a social cost equal to making all firms (type A and B firms) to modify their conduct, invest SC, and only offers a social benefit equal to the reduction in the expected social harm caused by the conduct of type B firms, $(1 - \pi_A)(P_{B1} - P_{B2})DS$, where π_A is the proportion of type A firms. In case the upper limit is exceeded, negligence is socially desirable if the following inequality is satisfied:

$$SC < (1 - \pi_A)(P_{B1} - P_{B2})DS,$$

$$D > \frac{C}{(1 - \pi_A)(P_{B1} - P_{B2})}.$$

That is, the social harm should be large enough to compensate for assuming the costs that the negligence regime encourages to type A firms to assume.

3.3.3. An ex-ante authorization regime

In case of an ex-ante authorization regime, we should set the fine in the following way to force type B firms to prefer the high level of precaution, q_2. In this regime, all firms have the same cost of taking the low level of precaution (q_1) that equals the expected value of the fine in case the competition authority detects that firms have not taken the high level of precautions, that it, in case firms have not invested in precautions to avoid that competition restrains ends up causing social harm.

The expected value of the fine in case a competition restrain is detected is pM, where M is the fine imposed by the competition authority in case the firm has not disclosed the competition restrain. The cost of taking the high level of precaution (q_2) is the expected value of the cost of precaution (SC), the cost of adjusting the strategies of the firm to make their disclosed competition restrain qualify as a legal restrain. After disclosing the competition restrain and making it acceptable, the firms do not have to pay fines nor remedies even in case that the restrain ends up causing social harm. Type B firms will disclose the competition restrain and adjust it to the legal standards if

$$pM > SC.$$

Therefore, the minimum fine that makes type B firms to disclose and adjusts their competition strategies to the legal standards is

$$M > \frac{SC}{p}.$$

As in the case of the ex-post negligence regime, the problem is that regulation of disclosure and legal standards, and also the fine, is too strict for type A firms. Those firms will eventually disclose and modify their strategies to make them qualify as legal when in fact, disclosure and modification of their conduct do not reduces the probability of causing social harm. In their case, disclosure and investing in making the competition restrain legal is socially undesirable.

An ex-ante authorization regime of competition restrains always imposes a social cost equal to making all firms (type A and B firms) to disclose and modify their conduct, SC , and only offers a social benefit equal to the reduction in the expected social harm caused by the conduct of type B firms, $(1-\pi_A)(P_{B1}-P_{B2})DS$, where π_A is the proportion of type A firms. An ex-ante authorization regime of competition restrains and mergers is socially desirable if the following inequality is satisfied:

$$SC < (1 - \pi_A)(P_{B1} - P_{B2})DS,$$

$$D > \frac{C}{(1 - \pi_A)(P_{B1} - P_{B2})}.$$

That is, the social harm should be large enough to compensate for assuming the costs of the ex-ante authorization regime.

3.4. Subversion of the law

Let us now introduce subversion at the enforcement stage. Once the competition authority or the judge decides to impose a fine or damages, firms may pay X to subvert the legal order. The firms may employ resources in hiring lawyers that delay the legal procedures, or even intimidate or bribe judges or competition authorities for forcing them to waive the fine or remedies. When firms minimize their costs, they will effectively subvert justice if $X < M$, that is when it is cheaper to subvert justice than paying fines.

3.5. Comparing control strategies

We should distinguish among three settings for comparing the minimum fines that make the different control strategies work.

In the first scenario, let's assume that $P_A > P_{B1}$. That is, the probability that a competition restrain causes damages when firms take the low precaution level is larger in type A firms than in type B firms. That assumption forces our analysis to consider that although type A firms cannot reduce the probability of causing damages by taking precautions, type A firms are more likely to cause damages than type B firms.

In this scenario, the minimum fines or remedies to make the control strategy work are relatively small in the case of the ex-ante authorization regime ($\frac{SC}{p}$), they are larger in case of an ex-post negligence regime ($\frac{SC}{P_{B1}}$), and they are even larger in case of an ex-ante strict liability regime ($\frac{SC}{P_{B1}-P_{B2}}$).

$$\frac{SC}{p} < \frac{SC}{P_A} < \frac{SC}{P_{B1}} < \frac{SC}{P_{B1} - P_{B2}}.$$

In this scenario the ex-post administrative negligence regime always dominates to the ex-post judiciary negligence regime because the minimum fine that makes the negligence regime to work ($\frac{SC}{P_{B1}}$) is larger than the maximum fine ($\frac{SC}{P_A}$) that makes this regime always better: $\frac{SC}{P_A} < \frac{SC}{P_{B1}}$. The administrative negligence regime can cope with the restriction that the social harm should be large enough to compensate for assuming the costs that the negligence regime encourages to type A firms to buy precautions when they are socially useless: $D < \frac{C}{(1-\pi_A)(P_{B1}-P_{B2})}$. So the European type of ex-post antitrust triumphs over the US type of negligence rule of reason regime. In the European type of antitrust at least only those type A firms that cause large damages will spend money buying useless precautions, while type A firms causing small damages will not because their practices will not qualify eventually as being against the public interest.

Figure 1 shows which is the optimal control strategies for avoiding competition restrains that cause social harm. The figure shows the optimal strategy for different levels of unit social harm (D) and unit cost of subversion (X/S). The horizontal axis shows the vulnerability of institutions to subversion. The vertical axis shows the unit social harm of the competition restrain. The model offers different optimal antitrust regimes depending on the vulnerability of institutions and on the unit social harm caused by the competition restrain.

[Figure 1 here]

In the second scenario, let's assume the opposite, that P_A is relatively small: $P_A < P_{B1} - P_{B2} < P_{B1}$. That is, the probability that a competition restrain causes damages when firms take the low precaution level is very much smaller in type A firms than in type B firms. That assumption forces our analysis to consider that type A firms not only cannot reduce the probability of causing damages by taking precautions, but also that type A firms are very less likely to cause damages than type B firms.

As in the previous scenario, the minimum fines or remedies to make the control strategy work are relatively small in the case of the ex-ante authorization regime ($\frac{SC}{p}$), they are larger in case of an ex-post negligence regime ($\frac{SC}{P_{B1}}$), and they are even larger in case of an ex-ante strict liability regime ($\frac{SC}{P_{B1}-P_{B2}}$) .

$$\frac{SC}{p} < \frac{SC}{P_{B1}} < \frac{SC}{P_{B1} - P_{B2}} < \frac{SC}{P_A}.$$

By contrast, in this scenario the US type of ex-post judiciary negligence rule-of-reason regime always dominates to the European type of ex-post administrative

regime. The maximum fine ($\frac{SC}{P_A}$) that limits the social desirability of the judiciary negligence regime is not binding. In this case, type A firms will not spend money buying socially useless precautions because they face a very little expected liability due to the low probability of causing private damages.

[Figure 2 here]

Finally, there is a third intermediate scenario in which P_A is smaller than P_{B1} but larger than $P_{B1} - P_{B2}$: that is, $P_{B1} - P_{B2} < P_A < P_{B1}$. In this scenario, the probability that a competition restrain causes damages when firms take the low precaution level is smaller in type A firms than in type B firms, but no so much smaller because the probability of type A firms causing damage is larger that the effectiveness of the precautions reducing the damage that type B firms cause. As in the previous scenario, the minimum fines or remedies to make the control strategy work are relatively small in the case of the ex-ante authorization regime ($\frac{SC}{p}$), they are larger in case of an ex-post negligence regime ($\frac{SC}{P_{B1}}$), and they are even larger in case of an ex-ante strict liability regime ($\frac{SC}{P_{B1}-P_{B2}}$) .

$$\frac{SC}{p} < \frac{SC}{P_{B1}} < \frac{SC}{P_A} < \frac{SC}{P_{B1} - P_{B2}}.$$

However, in this third scenario the ex-post judiciary negligence regime dominates to the ex-post administrative regime only for low levels of corruption. The administrative negligence regime can cope with the restriction that the social harm should be large enough to compensate for assuming the costs that the negligence regime encourages to type A firms to buy precautions when they are socially useless: $D < \frac{C}{(1-\pi_A)(P_{B1}-P_{B2})}$. In this scenario this restriction is binding only at low levels of corruption. See figure 3.

[Figure 3 here]

4. Concluding remarks

The institutional analysis of the enforcement problems in the antitrust arena offers different optimal antitrust regimes depending on the vulnerability of institutions and on the unit social harm caused by competition restrains. There is not an

antitrust policy that fits all countries and policy domains, and it could be even harmful to force harmonization within WTO or European wide trade agreements in which cross-country institutional capabilities differ strongly.

When institutions are extremely weak and the law and order can easily be subverted, it is better to have no antitrust law. Any mechanism of ex-ante authorization of competition restrains, or ex-post litigation will eventually be subverted. Firms will behave as if there were no antitrust law, and also will employ resources to subvert justice.

When institutions are moderately vulnerable, an ex-ante authorization regime of competition restrains would work. The minimum fine to make the authorization regime to work is low enough to avoid subversion. However, all firms would prefer to disclose and adjust their competitive strategies to the standards set by the authorities to obtain the authorization.. This behavior have a social cost. It is a waste to modify some firms strategies to comply with the legal standard because modifying some firms conducts do not reduces the probability of causing social harm. An ex-ante authorization regime managed under administrative law is only desirable when the social harm per unit of output is relatively large. This type of antitrust is what we observe in countries that set up registers of competitive restrains such as the ones that Britain and Spain had in the 1960s and 1970s. This was the type of antitrust governing the process of authorization of a subset of agreements between firms at the EU level until 2004 (single and block authorizations of agreements among competitors).

When institutions are less vulnerable, an ex-post negligence regime would be better because the costs for firms to subvert justice are larger than the minimum fines and remedies that make it work. However, there are different types of negligence regimes that dominates in different scenarios: an administrative type of negligence regime such as the European type of antitrust can cope with the fact that negligence might impose undesirable costs by making useless precautions to be taken by some firms; while, a judicial type of negligence regime cannot cope with those costs and therefore might be suboptimal in some circumstances. Administrative bodies can trade private damages against public gains. Judges under common or civil law cannot make such trade off, they should attend any private claim of damages.

One type of antitrust or the other dominates depending on the probability of damages that different types of firms might cause. When the probability of causing damages of those firms for which taking precautions is useless looms large, the ex-post administrative type of antitrust dominates (the European one). In this

case, at least those firms with high probability of causing small damages will not spend time and money to comply with the socially worthless pre-established legal standards. By contrast, when the probability of causing damages of firms for which taking precautions is useless is small, the ex-post judiciary type of antitrust (the US type) dominates. In this case, the low probability of causing damages makes sure that the expected liability in the negligence regime is very low, and therefore those firms for which taking precautions is useless have not incentive to spend money to comply with the legal standard. Gal (2004) reminds us that smaller markets have proportionally less firms in equilibrium than larger markets. And therefore, markets use to be more concentrated in smaller markets. This might tilt social perception in Europe towards considering that the probability of firms to cause damage to be large and that precautions are usually useless. This view supports an administrative type of negligence that signals to the firms that only those conducts that cause a large net social harm will be penalized.

And, when institutions are even less vulnerable, an ex-post strict liability judiciary regime (such as the per se illegal US cartel regime) will work because the costs of the firms to subvert justice is even larger than the relatively large amount of the minimum fines and remedies to make strict liability work.

As a corollary of the analysis carried out, we might think of the 2004 modernization package of EU antitrust as a reform that signals that institutions and rules governing antitrust in the EU are seen as stronger than they were. On one hand, firms agreements no longer are subject to an ex-ante authorization regime. They are subject to an ex-post negligence administrative regime that includes legal exemptions. On the other, the private enforcement of the cartel and the abuse of dominant position prohibitions in national courts might eventually turn EU antitrust to from an ex-post negligence administrative regime to an ex-post negligence judiciary regime. This is not going to happen overnight because, as stressed by the Ashurst (2004) review most European national laws require negligence or intention in non-contractual damage actions. And, negligence only tends to be presumed where a violation of the competition law is already shown. So, the ex-post administrative negligence regime dominates still the process in Europe balancing public gains and private damages in front of an ex-post judiciary negligence regime in which cases are adjudicated regarding only private damages.

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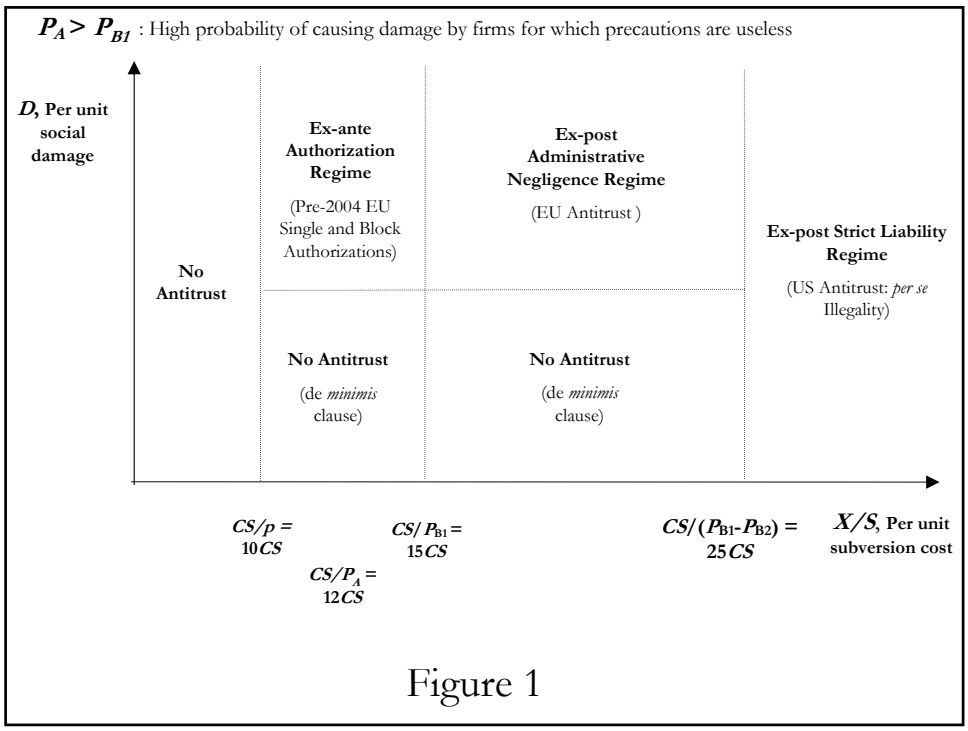

Figure 1

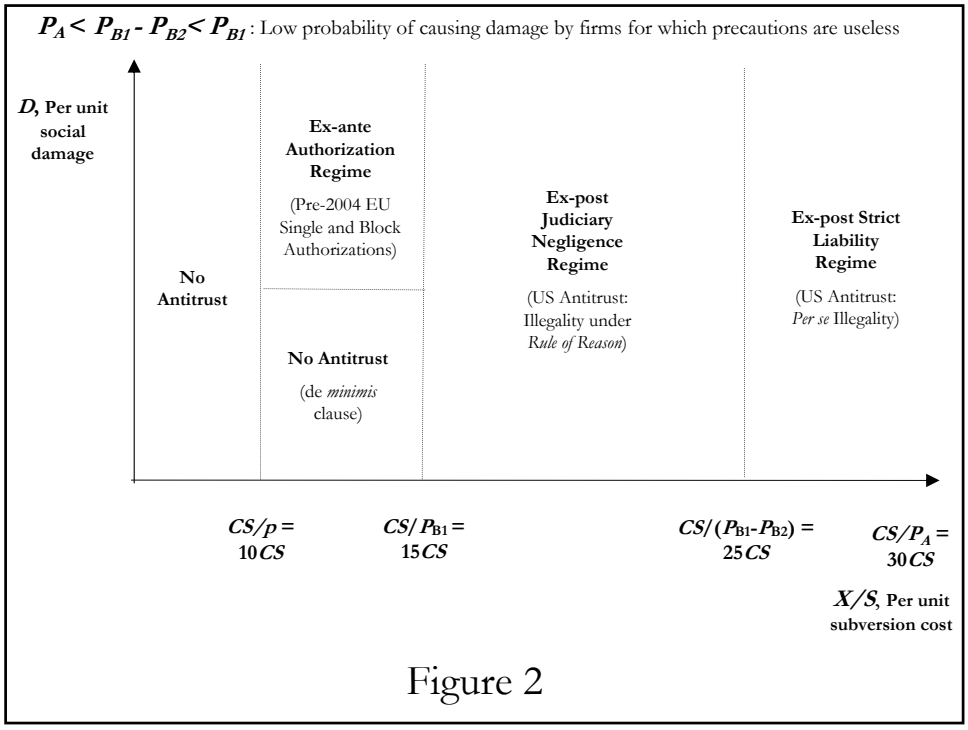

Figure 2

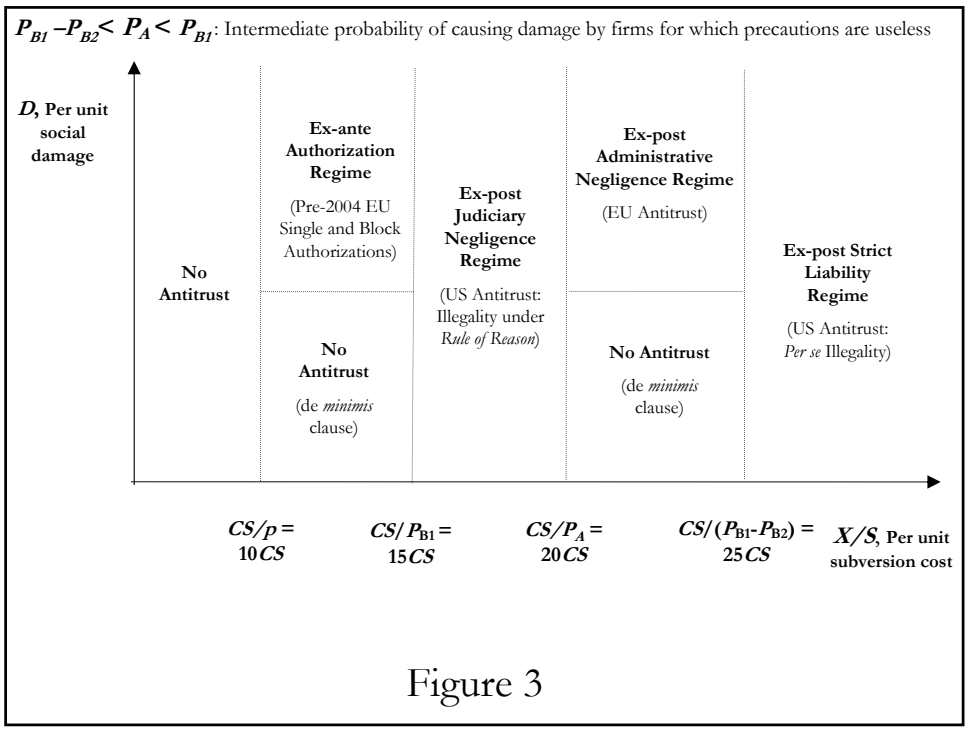
$P_{B1} - P_{B2} < P_A < P_{B1}$: Intermediate probability of causing damage by firms for which precautions are useless
D, Per unit social damage
No Antitrust
Ex-ante Authorization Regime
(Pre-2004 EU Single and Block Authorizations)
No Antitrust
(de minimis clause)
Ex-post Judiciary Negligence Regime
(US Antitrust: Illegality under Rule of Reason)
Ex-post Administrative Negligence Regime
(EU Antitrust)
No Antitrust
(de minimis clause)
Ex-post Strict Liability Regime
(US Antitrust: Per se Illegality)
CS/p = 10CS
CS/P_B1 = 15CS
CS/P_A = 20CS
CS/(P_B1-P_B2) = 25CS
X/S, Per unit subversion cost

Figure 3