

# China's Approach to Compulsory Licensing of Intellectual Property Under Its Anti-Monopoly Law

Michael Jacobs  
DePaul University College of Law

&

Xinzhu Zhang  
Chinese Academy of Social  
Sciences

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*Michael Jacobs\* & Xinzhu Zhang\*\**

While a discussion of the misuse of Intellectual Property Rights (IPRs) can be quite broad, this paper focuses on one aspect of a significant question regarding the relationship between antitrust and IP laws: Whether and on what terms courts and competition regulators should compel a dominant firm to license its powerful intellectual property to a smaller rival. As many know, this question has already generated substantial controversy, largely because the relevant law in the United States and Europe provide markedly different answers. In China's context, since compulsory licensing of IP is so complicated and subtle an issue, it may be too soon to recommend any specific approach. Certainly, more discussion and research are needed. However, as outlined in this paper, certain preliminary steps should be taken.

\*Distinguished Research Professor of Law, DePaul University College of Law.

\*\*Professor of Economics, Jiangxi University of Finance and Economics, Shanghai University of Finance and Economics, Chinese Academy of Social Sciences.

## I. Introduction

Over the past several decades, the competition law community has recognized that intellectual property (“IP”) law and antitrust, or competition, law share the fundamental goals of enhancing consumer welfare and promoting innovation. Indeed, the modern understanding of these two disciplines regards IP and antitrust as working in tandem to help bring new and better technologies, products, and services to consumers at lower prices.

In China, antimonopoly laws and institutions have developed only recently. IP and antimonopoly laws have therefore not been used to achieve the goals of promoting innovation and competition. With the enactment of the Trademark Law of 1982, China began to install a systematic legal framework for IP, at an early stage of the period of economic reform and opening.. But a comprehensive antitrust regime was established only recently, after the Anti-monopoly Law (“AML”) took effect in 2008. While the extent to which China’s IP laws are and will be actively enforced is a matter of conjecture, the creation of institutions for IP protection has contributed significantly to the inflow of foreign direct investment (“FDI”) and technology transfer, the driving forces of China’s sustained economic growth.

As China’s economy continues to open and expand, disputes regarding IP infringement have increased. Since China’s entry into the World Trade Organization, it is estimated that the infringement damages paid by Chinese firms to international companies that manufacture DVDs, TV sets, digital cameras, MP3, cars, telecommunications equipment, and so on have surpassed one billion dollars.<sup>1</sup> The imposition of these huge fines has placed a heavy burden on some Chinese firms and affected certain industries quite severely. It has also alerted the Chinese authorities to the importance of IP protection, the urgency of prohibiting the abuse of IP, and the relationship between IP protection and the maintenance and promotion of competition.

Over the past few years, while the Chinese government has continued its efforts to enhance the protection of IP, e.g. by creating the Steering Group of Intellectual Property Protection in 2004, it has strengthened regulations prohibiting the abuse of IP, especially with respect to IP restraints on competition. The milestone AML enacted in 2007 articulates clearly for the first time the fundamental legal principles guiding antimonopoly enforcement at the intersection of IP and antitrust. Moreover, the Outline of the National Intellectual Property Strategy released on June 5, 2008 indicates that preventing abuses of intellectual property rights (“IPRs”) forms part of the core of the Chinese national IP strategy.

IT HAS ALSO ALERTED THE CHINESE AUTHORITIES TO THE IMPORTANCE OF IP PROTECTION, THE URGENCY OF PROHIBITING THE ABUSE OF IP, AND THE RELATIONSHIP BETWEEN IP PROTECTION AND THE MAINTENANCE AND PROMOTION OF COMPETITION.

While a discussion of the misuse of IPRs can be quite broad, this paper focuses on one aspect of a significant question regarding the relationship between antitrust and IP laws: Whether and on what terms courts and competition regulators should compel a dominant firm to license its powerful intellectual property to a smaller rival. As many would know, this question has already generated substantial controversy, largely because the relevant law in the United States and Europe provide markedly different answers to it, differences that have been highlighted and will doubtless be exacerbated by the decision of the European Court of First Instance (since renamed the General Court) in the Microsoft case.

Modern economic theory suggests that, as a remedy for the abuse of powerful IP, compulsory licensing can serve two main purposes. The first relates directly to consumer welfare and would compel licensing in order to improve health or save lives. The second, the focus of this paper, would seek to remedy the anticompetitive misuse of IP by a dominant firm, which has foreclosed smaller rivals from market access or otherwise harmed consumers. This use of compulsory licensing aims to promote competition, or to remedy the effects of IP misuse, rather than to address consumer welfare directly.

In standard economic terms, compulsory licensing provides a remedy for static inefficiency—the deadweight loss incurred when an IP owner appropriates rents by excluding others from the relevant market and charging a monopoly price. This remedy, however, comes at a cost: Dissipating rents through compulsory licensing will reduce returns from research and development (“R&D”), discouraging innovation and creating dynamic loss. The dynamic loss will occur in several ways: the dominant firm will refrain from investing further and in the future; its rivals will be spared the need to invent around the dominant IP, and will thus forego efforts that could result in welfare-enhancing products; and other firms in other markets, now and in the future, will also be more reluctant to invest. A comprehensive approach to compulsory licensing must therefore attempt to balance static gains against dynamic losses.

What is the best balance? At the present time, there may not be one universally acceptable response. In some ways, the answer is country-dependent, since it hinges in an important sense on “local” conceptions of the value of intellectual property, the place of the dominant firm, the efficacy of market mechanisms, and the importance of long-term incentives for economic growth. The approaches of the United States and the EU are representative. Relevant case law in the United States values the dominant firm, trusts in market mechanisms, and places great importance on maintaining incentives for innovation. It is willing to tolerate short-term consumer harm in exchange for what it perceives to be the greater long-term benefit of strong incentives to invest. Consequently, compulsory licensing is rarely imposed by antitrust courts or advocated by enforcers. In contrast, EU law focuses on the short-run inefficiency of monopolistic distortion and the attendant and immediate harms to consumers, while placing much less

weight on incentives to innovate. Therefore, compulsory licensing has been ordered more frequently.

China has not yet produced a case or administrative decision involving compulsory licensing. But it faces the challenge of designing a sound compulsory licensing regime if it wants to make full and wise use of the newly enacted AML to prohibit the misuse of IP to restrain competition as well as to encourage investment in innovation. It is a difficult task, which will require not simply balancing IP protection and the promotion of competition, but will also invoke “political” aspects of IP regulation that may affect policy in a developing country like China. For example, since most patents with high technical content in China have been granted to non-residents, authorities may be inclined to tilt the balance in favor of compulsory licensing, simply on grounds of perceived national advantage: Chinese consumers will benefit; foreign firms will suffer. At the same time, however, the Chinese government is committed to a national strategy of creating an innovation-oriented country to sustain high economic growth and enhance long-term international competitiveness. This strategy contemplates, and is intended to encourage, a nation of inventors; local inventors, who will want and need the same kinds of strong IP protection and valuable incentives that compulsory licensing may prevent and discourage.

This paper first compares the U.S. and EU approaches to compulsory licensing of “powerful” IP, and then expands the discussion to include the Chinese context. It has modest aims. It will neither attempt to resolve the larger dispute about compulsory licensing, nor will it choose sides. Rather, it will describe the basis for the dispute, demonstrate that the opposing arguments are irreconcilable, and argue that these irreconcilable differences bear significantly on two fundamental issues in global competition law today: the prospect (and wisdom) of international convergence around a single approach to complicated antitrust questions; and the choices that newer competition law regimes—such as China’s—must face in fashioning substantive rules in areas where international consensus is, and is apt to remain, absent.

This paper argues that the antitrust laws of the United States and Europe differ in their approaches to compulsory licensing not because they subscribe to different schools of economic thought, but because the different political and cultural beliefs that inform and animate them lead inevitably to different answers. These political and cultural beliefs have little to do with economics. Indeed, they are persuasive in this context precisely because economic theory lacks explana-

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tory power in this area. The beliefs themselves reflect divergent opinions about the relative importance of the long term in antitrust analysis, about faith in the workings of complex regulatory regimes, and about confidence in the ability of markets to reach socially beneficial outcomes. And because these beliefs are primarily political—grounded, that is, in different historical experiences and cultures—it follows that the legal rules that emanate from them are (a) unlikely ever to converge, and (b) contingent, i.e. appropriate for the systems that embrace them, but not necessarily for anyone (or everyone) else.

## II. Compulsory Licensing and the Long Term

Intellectual property law is intended primarily to promote innovation.<sup>2</sup> IP law allows owners and creators to appropriate rents from their works and inventions by excluding others from copying, making, selling, or using them. The efficient extent and duration of the exclusionary period of any IP right is determined with reference to two tradeoffs. One is static loss against dynamic gain. Static loss can arise from the power to exclude, in those few cases where the invention generates market power, and from the attendant ability of the powerful firm to raise price above competitive level.<sup>3</sup> However, by allowing the patent owner to retain supernormal profits, IP law makes it worthwhile for inventors to commit significant resources to risky projects of research and development. The dynamic gain from those projects that result in successful innovation was characterized by Schumpeter as the source of true economic advance.

The other tradeoff is between static inefficiency and the disclosure of information. In return for the right to exclude others, an inventor must disclose the technology behind its patent. In contrast, if an inventor relies on trade secrets, it can also exclude others from using the technology—as long as it can protect the secret—but it need make no public disclosure of the relevant information. Since the informational gain to society from inventions dependent upon trade secrets is small (or non-existent), the level of inefficiency that is tolerated in markets dominated by the holder of a powerful trade secret should arguably be less than the inefficiency tolerated in markets dominated by patented inventions.

In the field of IP, compulsory licensing is usually intended to remedy an “anti-competitive” refusal to license powerful (market-dominating) IP.<sup>4</sup> From an economic perspective, the main benefit of compulsory licensing is the reduction of *ex post* static inefficiency incurred when the owner of a dominant product protected by intellectual property law appropriates rents by charging monopoly prices. But dissipating those rents through compulsory licensing will also reduce returns from R&D investments, which will *ex ante* discourage innovation and create dynamic losses. Moreover, on the margin compulsory licensing may encourage IP owners to rely more often on trade secrets to protect their IP, which will reduce the disclosure of socially valuable information.

Therefore, whether the compulsory licensing of “dominant” intellectual property constitutes a sound legal approach in general hinges on a comparison of short- versus long-run effects. Long-run effects, however, are notoriously difficult—impossible—to measure. But short-run effects—especially those that have already occurred—are largely amenable to measurement. For this reason, an institutional preference for resolving difficult competition law problems by reference to their short-term or static effects underlies much of competition law analysis in the United States and Europe. Thus, in both jurisdictions, regulators and courts assess the legality of competitor collaborations—contractual arrangements, joint ventures, and mergers—in part by comparing their past, present, or near-term anticompetitive consequences with their immediate or near term benefits. Conduct of dominant firms that might harm competition is usually subject to the same form of analysis.

In one important area, however, the European approach diverges from that of the United States. In the United States, a dominant firm possessed of powerful intellectual property can refuse to license that property to its rivals, or would-be rivals, even though access to the property is arguably necessary to foster or preserve competition in the short term. If it has previously licensed that property, the dominant firm can refuse to continue licensing it, as long as its refusal arises plausibly from the (presumptively valid) everyday desire to appropriate for itself the full value of its invention or creation, and even if the refusal would impede competition in the short run.

In Europe, the dominant firm operates under a more intrusive rule. Although the applicable law appears similar in certain superficial respects to that of the United States, IP licensing decisions come under much stricter regulatory and judicial scrutiny. Thus, while the dominant firm with powerful IP can normally refuse to license its property to rivals, it is required to license in “exceptional circumstances.” The CFI’s *Microsoft* ruling has significantly expanded the set of so-called “exceptional circumstances” to include relatively unexceptional situations in which smaller rivals demonstrate that they need access to the relevant IP in order to compete “effectively” with the dominant firm in a neighboring or secondary market, in which access to the IP would enable them either to develop a “new” product or to make “technical improvements” to their existing ones.

Even before the recent *Microsoft* opinion, this difference in approach to compulsory licensing was the subject of heated debate both within and between U.S. and EU antitrust circles. The *Microsoft* case has provided additional fuel for the

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antagonists. For the most part, however, the argument has concerned itself with practical matters: is the U.S. law sensible? Can refusals to license do more economic harm than good? Are courts and regulators competent to define and administer workable standards for compulsory licensing in general and for remedial orders in particular? While these are certainly important questions, the discussion has thus far overlooked the fundamental factor accounting for the difference between the European and U.S. viewpoints.

In important respects, antitrust law in the United States is animated by a deep-seated faith in the long term. A central tenet of this faith holds that a rule of law encouraging the possession and retention of monopoly power will create strong incentives over the long term for vigorous competition, as each firm strives to become a monopolist, and—therefore—very few succeed. Those few firms that do succeed—lawfully—will in turn encourage others to continue trying, provided of course that the successful receive their just rewards.

Another important article of faith holds that since innovation is the best engine of long-term economic growth, antitrust law should foster and protect incentives to innovate. An important way to achieve this goal is to allow dominant firms with valuable intellectual property to realize the full value of their inventions. Those firms will then continue to invest in invention, their rivals will need to invent to keep up with them, and—in the long term—social investment in invention will remain at usefully high levels, all to the benefit of consumers.

This faith in the long term comes with both a corollary and a cost. The corollary requires a minimum of regulatory intervention in the short term, since unwarranted intervention—in the form of compulsory licensing, for example—would, among other things, discourage future investment in invention and deprive society of the valuable long-term benefits that it would otherwise receive. The cost comes in the short run, since an institutional reluctance to intervene in markets dominated by powerful firms necessarily results in consumers' paying more than they would under a more aggressive enforcement

regime. The United States accepts this cost, regarding it as necessary to encourage investment in innovation.

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In contrast, the European regime does not trust so completely in the workings of the long term. Rather, in its approach to regulating the dominant firm, to merger review, and to the specific issue of compulsory IP licensing, it looks primarily to the short-term needs of consumers. It is therefore less tolerant of dominant firms in general, more apt to challenge their conduct, and more skeptical of appeals to the social value of encouraging firms to strive for dominance and of ensuring long-term incentives to invest in innovation.

### III. The Relevant Case Law, and the Relevant Differences, Briefly Discussed

Two strains of case law are relevant to this discussion. The more general pertains to the liability of the dominant firm for refusing to deal with its smaller rivals. The more particular covers the refusal of the dominant firm to license its powerful IP to smaller rivals. In both the United States and Europe, these areas of law are regarded as related but distinct.

#### A. THE U.S. CASE LAW

In both areas, U.S. law divides itself into two parts: (1) refusals to begin a course of dealing (or licensing); and (2) refusals to continue a course of dealing already begun. With regard to the former, the law provides a simple and readily comprehensible rule. It imposes no duty whatever on the dominant firm either to initiate a course of cooperative conduct with its rivals, or to respond positively to its rivals' requests for cooperation.

With regard to the latter, the law is somewhat more complicated. Prior to the Supreme Court's opinion in the *Trinko* case, the freedom of the dominant firm to discontinue a course of co-operative conduct with its smaller rivals was constrained—significantly in the view of some—by the Court's ruling in *Aspen Ski Co.* That case upheld a finding of liability against a dominant ski resort that had ceased co-operating with its smaller rival in selling all-area, six-day lift tickets, refusing even to sell its own lift tickets at retail to the smaller firm. The court found that: (a) the co-operation had begun when the relevant market was competitive; (b) consumers preferred the market with co-operation to the market without; (c) the defendant's behavior could plausibly be characterized as predatory – “[t]he jury may well have concluded that [the defendant] elected to forego . . . short-run benefits because it was more interested in reducing competition . . . over the long run by harming its smaller competitor,”<sup>5</sup> and (d), and perhaps most importantly, the dominant firm had failed to offer a valid business justification—an efficiency defense—for its conduct. The Court's opinion in *Aspen* was controversial, and had more than its share of critics, but until *Trinko* it played an important if controversial role in antitrust jurisprudence.

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*Trinko* limited *Aspen*, condemning it to a fate almost worse than death—irrelevance. It located *Aspen* “at or near the outer boundary” of section 2 liability. It referred to its holding as “a limited exception” to the general right of a dominant firm to refuse to deal with its rivals.<sup>6</sup> And it confined its future applicability to cases whose fact patterns neatly matched *Aspen*'s own. In particular, the Court observed, the defendant in *Aspen* terminated “a voluntary (*and thus presumably profitable*) course of dealing,” refusing to provide its competitor with “a product that it already sold at retail,” facts that now seem—after

*Trinko*, that is—essential to plausible refusal-to-deal claims, whose future in general has been cast into grave doubt.

The U.S. law regarding a dominant firm's refusal to license powerful IP to rivals is somewhat less clear, but not much. The Supreme Court has not ruled on the relevant issues, but a handful of appeals courts have. From these rulings, several salient points have emerged. First, it seems clear—as it is with refusals to deal in general—that a dominant firm has no obligation to cooperate with rivals in the first instance, and can reject with impunity their requests for access to valuable IP. No reported case in the United States imposes antitrust liability for a unilateral refusal to sell or license a patent. And several expressly decline to do so.

The most notable of these is the Second Circuit's 1981 opinion upholding Xerox' refusal to license its plain-paper copying technology to SCM, which claimed that compulsory licensing would create competition in a market without any. Xerox had steadfastly refused to license its technology to SCM, a refusal vindicated on appeal: To rule otherwise, wrote the Court, “would severely trample upon the incentives provided by our patent laws and thus undermine the entire patent system.”<sup>7</sup>

As to refusals to continue licensing IP to one's rivals, the law is slightly less clear. Among circuit courts that have ruled on the issue, small differences in opinion exist. Thus, in the *Image Technical Services* case, in which Kodak was sued for, among other things, having stopped licensing patented copier parts to rivals in the after-market for service, the Ninth Circuit held that a monopolist's desire to exclude others from its lawfully obtained intellectual property “is a presumptively valid business justification for any immediate harm to consumers.”<sup>8</sup> In the Ninth Circuit's view, plaintiffs could rebut the presumption of validity by showing—through proof of the monopolist's subjective intent—that the claimed desire to exclude was “pretextual,” a cloak for some different and noxious anti-competitive intention.

Three years later, on nearly identical facts, the Federal Circuit adopted a modified version of the Ninth Circuit's test, in a case brought against Xerox by rivals in a parts and service after-market. Though relatively small, the Federal Circuit's modification makes a world of difference. Its test eschews any inquiry whatever into the monopolist's subjective intention in refusing to license its rival. Thus, under this test, unless the monopolist has (a) obtained its IP unlawfully<sup>9</sup> or (b) brought “sham litigation” to enforce its patent, its claimed desire to exclude others from using its intellectual property provides an unassailable defense to antitrust claims brought by disappointed rivals.

It is easy to over-emphasize the difference between the Ninth and Federal Circuits' respective approaches to the issue of the monopolist's subjective intent. But focusing too closely on their differences can obscure the large common ground shared by the two opinions. Both make it very difficult for plaintiffs to

prevail. Each recognizes the validity and importance of the monopolist's desire to use the exclusionary power in its valuable IP for its own exclusive benefit. And each creates a strong presumption favoring the use of that power and disfavoring rivals' attempts to interfere with it. For another, firms possessed of powerful IP and well-advised by counsel are not likely to run afoul of Kodak in the future. They can easily create a paper trail of bona fide memoranda announcing the high importance attached to capturing all available benefits from valuable IP.

## B. THE EUROPEAN CASE LAW

Until recently, reasonable people could disagree about whether EU law regarding the ability of the dominant firm to refuse to deal with smaller rivals differed materially from its counterpart in the United States. In general, that is, in cases not involving powerful IP, European courts had adopted a relatively strict version of the so-called essential facilities doctrine. Thus, a dominant firm possessed of powerful property (such as a fleet of trucks which were arguably indispensable for the nationwide home delivery of newspapers) was not required to afford a smaller rival access to that property, since the rival had failed to show—as the law required—that the denial of access “was likely to eliminate *all* competition on the part of the smaller firm.”<sup>10</sup> While not so protective of the dominant firm’s interests as U.S. law, the requirements of (i) indispensability and (ii) the likelihood that, without access, all competition in the relevant market would be eliminated nevertheless provided the dominant firm in Europe with a large degree of freedom.

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As to the compulsory licensing of intellectual property, the pre-Microsoft legal regime approached access requests cautiously. After affirming in the *Volvo* case the inventor’s exclusive right to refuse to allow others to reproduce its patented property, the ECJ expanded the rights of access-seekers, but gradually and only in “exceptional circumstances.” In *Magill*, holders of what might be termed “weak” copyrights in separate, weekly listings of television programs were made to license their copyrighted material to a firm seeking to publish a new product that would collect all of the listings in one comprehensive guide. Four factors dictated the outcome: (1) the copyright holders were the only sources of the information indispensable to the compilation of a comprehensive guide; (2) their refusal to license “prevented the appearance of a new product;” (3) there was no good business justification for their refusal; and (4) through their refusal they effectively reserved for themselves—eliminated *all* competition in—the market for weekly program guides.

The holding in *Magill* was ratified by the opinion in the *IMS Health* case, another dispute involving the refusal of a dominant firm to license “weak” but

arguably indispensable copyrighted material to a smaller rival. The Court in IMS held that the refusal to grant a license to indispensable IP would constitute an abuse of a dominant position under the following circumstances: (a) the access-seeker “intends to offer a new product or service not offered by the copyright owner and for which there is potential consumer demand;” (b) the refusal “is not justified by objective considerations” [valid business justifications]; and (c) the refusal reserves the relevant market for the dominant firm “by eliminating *all* competition on that market.”

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The Microsoft opinion has changed European law dramatically by expanding each of the three criteria set forth in IMS. First, Microsoft interpreted the “new product” requirement broadly, allowing it to encompass potential improvements to rivals’ existing products already competing in the same market as those offered by the dominant firm. Second, it held that unproven claims about the general tendency of sharing obligations to affect innovation on the margin were not sufficient to constitute an “objective justification” for a refusal to license. Rather, it held that such a justification required the dominant firm to “prove” the extent to which its incentives to invest in innovation would be weakened. And third, it changed the requirement that the refusal eliminate “all” competition in the relevant market, into one that asks whether the refusal eliminates “effective” competition in that market. Collectively, these changes create a large and uncomfortable gap between the now relatively permissive European regime and the relatively restrictive American one.

#### IV. Given That EU and U.S. Competition Law Both Aim Primarily to Protect Consumer Welfare, What Accounts for the Difference Between Them?

Since both regimes explicitly identify the protection of “consumer welfare” as the main objective of competition law, the existence of such a significant difference in approach seems fundamental, remarkable, and unsettling. The difference is fundamental because it suggests that there might be, for the very same conduct, different and competing time frames within which to assess consumer welfare. It is remarkable because it implicitly asks—even now, at this relatively late and sophisticated point in antitrust history—on which time frame the analysis should focus. And it is unsettling because the lack of consensus on such a basic matter suggests that there are fixed limits to the ability of economic analysis to solve some of antitrust law’s most pressing problems, and that perhaps one can and indeed must resort to some other, explicitly political calculus to answer these questions.

In this regard, the European approach focuses on the immediate and obvious benefits to consumers that flow from requiring dominant firms to license their valuable IP to smaller rivals. In the short term, smaller rivals can improve upon the relevant technology, and offer consumers a greater choice of products, or at least a greater quantity of roughly similar products at (necessarily) lower prices. Access to the dominant technology could well enable the smaller rivals to remain viably competitive in the short term and protect them from having to cede the market to the dominant player then and for the foreseeable future. Consequently, in the short term, prices will fall, output will rise, choice may expand, and dominance will be checked. Consumers benefit. While the European position would certainly acknowledge the possibility that compulsory licensing might, at the margin, dampen long-term incentives to innovate, it appears agnostic about this possibility, according it (non-dispositive) weight and only then when the dominant firm can “prove” that the licensing in question would weaken its incentives to invent.

In this area, the United States sees consumer welfare in an entirely different light. It postulates that in the long run consumers benefit enormously from innovation; that ongoing innovation requires a set of incentives and protections that enable inventors to capture the full value of their inventions; and that legal rules that either discourage the incentives or weaken the protections will ultimately serve to diminish investment in invention and thus run counter to consumers’ long term interests. Put another way, the U.S. view rejects the notion that compulsory licensing truly serves consumer welfare. While it would admit—as it must—that compulsory licensing affords consumers with greater choice and lower prices in the short term, it insists that in the long run those benefits are illusory. Eventually, goes the argument, a regime that requires dominant firms to provide rivals with access to valuable IP will sap innovation incentives across the board—Incentives not only of the incumbent dominant firm, but also of its smaller rivals and of would-be dominant firms now and in the future. In the long term, these weaker incentives will lead to fewer valuable inventions and a serious net loss of consumer welfare.

Three things about these different approaches should be clear. The first is that each relies on assumptions that economics cannot validate. The second is that their respective costs and benefits are incommensurable, so they cannot be usefully compared. The third follows from the first two; that their foundations are political, historical, and cultural, valid for each country or regime, but not perhaps fully instructive for others.

Economics cannot help determine whether either the EU or the U.S. approach to compulsory IP licensing is sensible. Of course, economics can confidently evaluate improvements to consumer welfare in the short term: Compulsory

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licensing should yield greater choice and increased output. This is not problematic. The problem lies instead in attempting to conduct the trade-off between those short-term improvements and the supposed longer-term harms. So, again, economics can confidently predict that compulsory licensing will reduce returns to invention and that therefore—on the margin—there will be less investment in invention in the future, a decrease likely to harm consumers. But how much less investment will there be? And how much less must there be before useful innovation is decreased? Is there a positive correlation between amounts invested in innovation and valuable invention? And what if there is currently over-investment in innovation? If so, then maybe decreased incentives would, over time, reduce investment to the socially efficient level. The point is that economics is unable to provide answers to these fundamental questions.

But even if the long-term incentive effects of a more frequent compulsory licensing regime could be measured in some manner, other significant problems of measurement and comparison would remain. For example, the short-term benefits of lower prices and greater choice are not readily commensurable with the long-term benefits of higher incentives to invest in invention. Investments do not always yield inventions, for one thing. For another, there are at least four types of relevant investors, each with a slightly different set of incentives: (i) dominant incumbents, (ii) smaller rivals (that would, under U.S. law for example, have incentives to invent around, or over, the incumbent's IP), (iii) existing potential entrants into the relevant and other IP markets; and (iv) future inventors. Comparing all of these uncertain potential long-term losses to the more definite gains obtainable in the near term would almost certainly be an exercise in futility.

These observations cut three ways. First, they mean that the U.S. bias in favor of protecting the dominant firm's incentives to innovate inevitably lacks an empirical foundation, and may (or may not) be misplaced. Second, they mean that the European tendency to compel licensing more frequently does not, because it cannot, weigh off the losses of the likely but unquantifiable disincentives to invest that flow from compulsory licensing. It, too, may be misplaced.

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Consequently, except at the most basic level—that of identifying the very general incentive effects of the relevant legal rules—economic analysis is unhelpful. Third, if economic analysis does not dictate the choice of a legal rule in this area something else must, something non-economic—in other words, something political.

There is not the space here to rehearse the obvious and various historical differences between the United States and Europe that might account for their differing choices about how to treat the compulsory licensing of powerful IP. Nearly from its inception, the United States has enjoyed a national market in goods and serv-

ices relatively free of local interference. The EU is still in the process of developing such a market. The United States has very little history of state-owned firms; the vast majority of its monopolists gained their dominance on the merits. In Europe, by contrast, many of today's monopolists—in transport, electricity, and telephony, for example—were yesterday's state-owned companies.

For a variety of reasons, over the past century markets have worked more effectively in the United States than in Europe. They have been fluid, and Americans in general seem to trust their workings. Over the long term, the United States has been inventive: from a social perspective, investments in innovation seem to have paid big dividends to society. Europe has had very different experiences with markets, with local protectionism, with dominant firms, and with invention. Given these differences, and others, it would be odd indeed if the two legal regimes supplied identical rules to the resolution of problems whose answers are not apodictically ordained by economics.

This conclusion holds several important implications for larger issues central to competition law. But before discussing them, it bears noting that the issue of compulsory licensing is not the only area of competition law where questions are answered by resort to historical and cultural referents. The obligation of the dominant firm to license its valuable IP to smaller rivals is simply one of a much bigger set of questions pertaining to what kinds of behavior constitute an abuse of dominance, or monopolization. This large question can arise in many settings and business contexts, but in every case its resolution necessarily begins with certain basic assumptions about the dominant firm in general.

The U.S. not only accepts dominance, but welcomes it. The Supreme Court has recognized that the possibility of dominance creates incentives—again in the long term—for every business to invest in assets that might enable it to achieve the monopoly rents available to dominant firms. Of course, if most firms compete to become dominant, then very few will actually succeed; and the result will be an economy that promotes consumer welfare. Markets can almost always be trusted to work. But in those relatively rare circumstances when a firm does outstrip its rivals, its success will both identify it as a boon to consumers and serve as a pleasant reminder to others—in the long run—that large rewards can accompany dominance fairly earned. Moreover, if smaller firms cannot match the dominant firm's appeal to consumers, no tears will be shed on their behalf: in the long term, other challengers will enter the market, and the dominant firm, like so many before it, will lose its power to a rival with even more appeal to consumers.

Recently, the United States Supreme Court, without a dissenting voice, referred to the “mere possession of monopoly power” as “an important element of the free-market system,” observing that “the opportunity to charge monopoly prices—at least for a short period—is what attracts ‘business acumen’ in the first place; it induces risk taking that produces innovation and economic growth.”<sup>11</sup> Restated, the Court’s view tolerates certain short-run costs associated with the

lawful possession of monopoly power, and imposes a significant burden on those who would complain about monopoly conduct, because it regards those costs (and that burden) as indispensable and unavoidable by-products of an incentive system crucial to the production of “innovation and economic growth.”

The EU is suspicious of dominance, rues its arrival, and encourages its demise. It defines dominance more broadly, and limits its exercise more strictly, than does the United States. Opinions of important appellate courts do not contain—as *Trinko* did—judicial praise for the beneficial economic role played by the domi-

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nant firm. There is less confidence that competition can undo dominance, and more fear that dominance will become and remain entrenched for the long term. Thus, as demonstrated by Microsoft, there is a preference in Europe for short-term “fixes” to the “problem” of dominance,

for regulation now rather than competition later, and for the preservation (and even the support) of smaller, less efficient rivals, in the hope that they can somehow check the power of the dominant firm and protect consumers from future abuse.

We have drawn these differences broadly, but they are no less real for that. Significantly, like the narrower dispute about the proper approach to IP licensing, these different beliefs about the nature of the dominant firm and its relationship to the competitive process reflect views that arise largely from divergent experience with markets and dominant firms, and from the differing biases that those experiences have generated. And importantly, these differences exist and endure because in large measure economics offers no testable hypothesis about whether in the long run dominance should be encouraged or constrained.

## V. What Are the Broader Implications of These Differences?

First, the differences in approach are important. Among other things, they have significant practical implications for the enforcement of competition law, not just in Europe and the United States, but also in the world at large. In product markets that are truly international, the most aggressive competition law regime can effectively create rules of world-wide application. Now that European law has made it relatively easier for smaller firms to compel dominant rivals to afford them access to valuable IP, it will be difficult if not impossible for jurisdictions with different views on this issue, and the companies doing business in them, to avoid the impact of the European rule. For practical reasons, dominant firms will not often adopt a range of country-by-country licensing practices, and European law will thus become the *de facto* rule in many jurisdictions that might otherwise prefer their own, distinct approach to this issue. To that extent, European law

may create a significant negative externality, serving the short-run interests of Europeans, but in the process imposing significant costs upon other countries' perceived interests.

Second, the differences in approach are irreconcilable. Antitrust analysis in the United States exalts the social and economic importance of the need to maintain, and even to expand, long-term incentives to innovate. They play a role that is at once powerful and unquestioned. Though it may be both distant and unknowable, the long term is very much alive in U.S. antitrust law. In Europe, the long term occupies a subordinate status. There seems to be no regulatory or judicial presumption that current legal rules will meaningfully affect incentives for long-term innovation. And indeed, the efficacy of such incentives is—in court—a matter that must be established by proof, rather than through an *a priori* presumption.

Moreover, the differences are irreconcilable because the values that explain them are incommensurate. The European regime places a high value on the short-term benefits that consumers will likely realize from a legal rule that would sometimes afford smaller firms access to the powerful IP of their dominant rivals. The U.S. approach regards those benefits as detriments in sheep's clothing, seeing them as deeply corrosive of more highly valued long-term incentives to innovate. How can one reasonably compare the value of the short-term benefits favored by Europe to the value of the longer-term benefits preferred by the United States? Any attempt at such a comparison would require something akin to "judging whether a particular line is longer than a particular rock is heavy."<sup>12</sup> Nor can one assess—except by resort to a distinctly political calculus—whether the short-term benefits are somehow more important or desirable than those in the longer term. Measurement and comparison are simply not helpful. Without a useful metric, or a workable set of shared values, the different approaches cannot be reconciled.

Third, the fact that the differences are political—non-economic—and irreconcilable suggests that the two regimes are highly unlikely to converge in the future on a means of resolving them. The differences are apt to be durable. And while the United States and EU, and other members of the world's antitrust enforcement community, have in recent years quite usefully adopted convergent approaches to the prosecution of international criminal cartels and the procedures for reviewing multi-jurisdictional mergers, there seem to be distinct limits to the possibility of future convergence around a resolution of the issues discussed in this paper.

THIRD, THE FACT THAT THE  
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Finally, this analysis contains an important lesson for the world's new and emerging competition law regimes. The fact that the two most developed systems disagree markedly in their approaches to the issues discussed here, and that they disagree for reasons of policy, history, and culture, suggests that certain aspects of competition law—not by any means all or even most, but some—are contingent, and properly variable. Those aspects of the law do not admit of one “right” response, or perhaps of any “right” response. Rather, they admit of several responses, each contestable, all debatable, and none paramount or universally conclusive.

This is not to say that each nation, or each antitrust regime, ought to go its own way in fashioning rules for the compulsory licensing of dominant intellectual property. It may be that current institutional mechanisms preclude a uniform approach to this issue. But in a world in which countries fully respected one another's economic histories and values, one country might well take into account another's history and values when applying its legal rules to that other country's firms. Those U.S. firms with dominant IP, for example, rose to dominance in a climate that encouraged them to invest and promised them—that through the applicable legal rules—that they alone would reap the benefits of those investments.

Without that climate and those rules, it seems fair to say, some of the valuable IP produced by U.S. firms would not have found its way to market. Consequently, it might be appropriate, respectful, and properly sensitive for antitrust regimes outside the United States to recognize that imposing compulsory licensing obligations upon such firms serves not only to reject the U.S. rule of law, and to defeat the initial expectations of the inventing firms, but also to disregard the culture and history from which those firms arose. And, of course, this kind of recognition and respect must run in both—or all—directions. U.S. and European courts and regulators should acknowledge and respect Chinese economic history as well, and bring to their tasks an informed understanding of the remarkable changes that the Chinese economy has undergone in the past three decades.

Moreover, it should be noted that in both the United States and the EU, the issue of compulsory licensing applies only in circumstances where the relevant intellectual property has enabled a firm to become or remain “dominant” in a properly defined antitrust market. Neither regime even contemplates the possibility that compulsory licensing might be imposed on a non-dominant firm. Thus, while the two regimes differ significantly regarding their approach to compelling dominant firms to share their valuable IP, they agree that non-dominant firms are to be free of any such compulsion.

## VI. Legal Framework for Compulsory Licensing of IP in China

In this section we briefly describe China's legal framework regulating the intersection of IP laws and competition laws, particularly with respect to compulsory licensing. Since the relevant substantive rules are scattered in a variety of laws, which is a unique feature of China's legal rules governing both IP and competition, it is helpful to clarify the relationship between these bodies of law. Civil law, contract law, IP law, and competition law provide the main statutory rules for compulsory licensing of IP in China.

An intellectual property right, defined legally as the ownership of intellectual property, is a civil right under Chinese law. According to Article 71 of China's Civil Law, the owner of IP has the authority to lawfully possess, utilize, benefit from, and dispose of his IP in accordance with laws. This means that the refusal to license IP is a legal right of the owner. There may be three legal ramifications of refusals to license IP. One is that refusals to license are legal as long as they are justified by valid reasons. The second is that they may constitute an abuse of IP law alone and are unrelated to competition concerns. In this case compulsory licensing may be explored but not for the purpose of addressing abuses of market power. The third is that refusal to license may be an abuse of market power and compulsory licensing may be used to prohibit or remedy such an abuse in IP-related markets.

Thus the fundamental legal principle for compulsory licensing in China is that refusal to license IP is a right of the owner guaranteed and protected by civil law and IP law. However, this right is not absolute and receives protection only if the owner does not abuse it. If the owner of IP abuses the right to refuse to license, with the purpose or effect of eliminating or restricting competition, antitrust liability may arise and compulsory licensing may be ordered.

THUS THE FUNDAMENTAL LEGAL PRINCIPLE FOR COMPULSORY LICENSING IN CHINA IS THAT REFUSAL TO LICENSE IP IS A RIGHT OF THE OWNER GUARANTEED AND PROTECTED BY CIVIL LAW AND IP LAW.

### A. CHINA'S LAWS ON THE INTERSECTION OF IP AND COMPETITION

#### 1. IP Laws

To facilitate the development of a market-oriented economy, China has created a systematic legal framework to protect IP.<sup>13</sup> But the legal rules guiding compulsory licensing of IP have emerged only gradually. The main body of laws covering compulsory licensing includes the Patent Law, the Rules for the Implementation of the Patent Law, Regulations on the Protection of Layout-Designs of Integrated Circuits, and Measures for the Implementation of the Patent Compulsory Licensing.<sup>14</sup>

China enacted its first Patent Law in 1984.<sup>15</sup> At that time, China had not yet fully achieved the institutional capacities and economic conditions necessary for installing a sound legal system for the protection of IP. Understandably, as a result, compulsory licensing of IP was not approached in a sophisticated fashion. Largely influenced by the country's eagerness to join the Paris Convention on the Protection of Industrial Property ("Paris Convention"), the compulsory licensing rules in the Patent Law, which were largely borrowed from the Paris Convention, provided that compulsory licensing should be imposed only if a patent owner had not fulfilled its obligation to use or practice the patent within a specified period of time (the carrying-out rule) or a technically more advanced patent depended for its practice on an existing patent (the dependence rule). The law did not deal with whether compulsory licensing should be imposed to prohibit or remedy anticompetitive conduct.

The 1984 Patent Law and the ensuing Measure for Implementation, released in 1985, failed to address several key issues. Besides, the Chinese government pledged then to fulfill its commitment to the Memorandum of Understanding between the People's Republic of China and the United States of America on Protection of Intellectual Property Rights. The Patent Law was revised in 1992, in light of the Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPs") reached at the Uruguay Round of negotiations. The rules respecting compulsory licensing left the dependence rule unchanged—compulsory licensing may still be imposed under this circumstance. The carrying out rule was replaced by a procedure governing refusals to license. In particular, if any entity "qualified" to exploit the invention in question has requested a license from the patentee of that invention on "reasonable terms," and has been unable to obtain such a license within a reasonable period of time, the Patent Office may, upon application of that entity, grant it a compulsory license to exploit the patent. Again, the 1992 Patent Law did not mention explicitly whether compulsory licensing was predicated on the patentee's "dominance," or "abuse" of dominance, and made no mention of competition concerns.

In order to join the World Trade Organization, China revised its Patent Law again in 2000 in order to make it accord more closely with TRIPs. While refusals to license and "dependent" patents still constituted the main circumstances where compulsory licensing might be imposed, significant changes were made to the relevant substantive rules. The precondition for compulsory licensing of technical advancements was amended to require "significant and breakthrough" technical advancements. More importantly for our purpose, Article 72 (4) of the Measure for Implementation issued in 2001 raised the possibility that compulsory licensing could be explored to remedy a practice determined to be anticompetitive after judicial or administrative process. This was the first appearance in the Patent Law of language permitting compulsory licensing to be used to address competition problems.

The latest revision of the Patent Law was published in 2008, after the enactment of the Anti-Monopoly Law. There are now six circumstances in which compulsory licensing may be explored. In particular, Article 48 of the new Patent Law stipulates that compulsory licensing of IP shall be imposed to remedy certain kinds of anticompetitive conduct.<sup>16</sup>

Compulsory licensing to address competition concerns is also mentioned in the Regulations on the Protection of Layout-Designs of Integrated Circuits issued in 2001, which stipulate that compulsory licensing may be imposed upon the holder of rights in layout-design, in order to address unfair competition concerns.<sup>17</sup> Because the AML had not been enacted when these regulations were issued, this area of competition law was regulated by the Anti-Unfair Competition Law, which listed 11 types of “unfair” competition behaviors, five of which were declared to be “anti-competitive” conduct.

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## 2. Contract Laws

Another body of law that contains rules against misuse of market power conferred by IP is contract law. In particular, Article 329 of the Contract Law enacted in 1999 states that any contracts that illegally monopolize technologies, hinder technical progress, or infringe upon technological products of others are invalid. Because this rule is very broad, the Supreme People’s Court issued a judicial interpretation on December 16, 2004,<sup>18</sup> which listed six restrictive terms involved in IP contracts, including quantity restriction, limitation of territory for use of technology, price-fixing, restriction of distribution channels, unreasonable grant-back, non-competition clause, tie-in, and no challenge clause. Neither Contract Law nor the Judicial Interpretation of the Supreme Court explicitly mentioned whether compulsory licensing could be used to remedy anticompetitive conduct in the field of IP.

The Regulation on Import and Export of Technologies issued by the State Council in 2001, and the two versions of the Foreign Trade Law issued in 1994 and 2004, also contain rules against IP restraints on competition. In particular, Article 30 of the Regulation on Import and Export of Technologies provides that if the owner of IP prohibits a licensee from challenging the validity of the IPRs in the licensing contract, forces the licensee to accept a bundle of licenses, requires exclusive grant-back clauses, or distorts fair competition in foreign trade, the Administration of Foreign Trade under the State Council has the authority to adopt measures to address the harm. But again, the laws make no mention of compulsory licensing.

### 3. Competition Laws

Before the AML was enacted, statutory rules against anticompetitive conduct were scattered among several sets of laws and regulations. These included the Anti-Unfair Competition Law, the Price Law, and the Tendering and Bidding Law, which were enacted by the People's Congress, China's national legislative assembly, as well as Regulations on Telecommunications and Regulations on Electricity, which were issued by the State Council. The larger body of competition law in China also encompassed a variety of regulations issued at the ministerial level, and laws and regulations issued by local governments. In general, unlike the laws and regulations promulgated by the People's Congress and the State Council, these local laws and regulations impose rules against monopolistic conduct under specific circumstances in particular jurisdictions. However,

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none of them address the competition problems that might arise with respect to IP, let alone those pertaining to compulsory licensing.

In 2007, China enacted the Anti-Monopoly Law, the first comprehensive competition law in China's history. Among other things, the AML explicitly promulgates the legal principles guiding antitrust enforcement related to IP. Article 55 of the AML stipulates that while the law shall not interfere with the conduct of business operators to exercise their IP rights under relevant laws and administrative regulations, it prohibits business operators from eliminating or restricting market competition by abusing their IP rights.

The first part of Article 55 means that the law shall not apply to the exercise of IP rights as long as the relevant conduct does not constitute an abuse of the power conferred by those rights. The second part implies that misuse of IP rights is not exempt from coverage by the AML. Thus, the anticompetitive misuse of IP rights may result in liability, if the antitrust enforcement agencies can establish that the owner of the IP has otherwise violated the law. According to Article 3 of the AML, anticompetitive conduct includes "monopolistic agreements" among business operators, abuse of dominant market positions by business operators, and concentration of business operators that eliminates or restricts competition or might eliminate or restrict competition. Though it is not yet clear, these acts may constitute the kind of "abuse" prohibited by Article 55.

Until recently, neither the AML nor the other competition laws had directly addressed refusals to license IPRs. Article 17 of the AML prescribes some general circumstances under which antitrust liability may flow from the refusal to license IP that possesses market power. Article 17 (1) of the AML may impose liability if the licensing fee for the relevant IP is "too high," and thus unfair. Since charging high prices for licensing is closely related to refusals to license, this Article may

be interpreted to require compulsory licensing when the owner of “dominant” IP rights seeks to charge the monopoly price to would-be licensees.

Under Article 17 (3), unilateral refusals to license IP without justifiable reasons may result in liability, which means that under the injunction requirement of Article 15,<sup>19</sup> compulsory licensing may be used to remedy an “anti-competitive” refusal to license. Under Article 17 (5), which sets forth the rule against tie-ins, certain kinds of conditional licensing may be subject to antitrust liability. Finally, Article 17 (6) proscribes unjustified discrimination. However, it is important to emphasize that the AML has adopted the general principle that rule of reason analysis governs the establishment of liability under these rules, which suggests that refusals to license may be justified by “valid” reasons.

HOWEVER, IT IS IMPORTANT TO EMPHASIZE THAT THE AML HAS ADOPTED THE GENERAL PRINCIPLE THAT RULE OF REASON ANALYSIS GOVERNS THE ESTABLISHMENT OF LIABILITY UNDER THESE RULES.

## B. JURISDICTIONS FOR ANTITRUST ENFORCEMENT IN IP

Since China has not yet produced a single case or administrative decision dealing directly with compulsory licensing, it is not possible to analyze the relevant enforcement policies or activities. Instead, we shall provide a brief discussion of the enforcement institutions with the authority to deal with IP restraints on competition and with compulsory licensing.

### 1. Administration Enforcement

The State Intellectual Property Office (“SIPO”), an administrative agency under the State Council, is charged with enforcing IP law. In particular, SIPO is responsible for investigating and deciding issues arising out of claims for compulsory licensing, including the appropriate licensing fees and the length of the license. This grant of authority suggests that all issues relating to compulsory licensing, even those arguably pertaining to anticompetitive conduct, may fall within the jurisdiction of SIPO. IP laws require, however, that a case alleging that misuse of IP has restrained competition should be decided according to the relevant competition laws.

Based on the AML and the authorization by the State Council, the power to enforce the AML is shared by the Ministry of Commerce (“MOFCOM”), the National Development and Reform Commission (“NDRC”), and the State Administration for Industry & Commerce (“SAIC”), which are, respectively, in charge of dealing with merger control, price agreements and price abuse of dominant position, and non-price abuse of dominance. Since compulsory licensing would usually be imposed to remedy the abuse of market power, both the NDRC and the SAIC may have authority to deal with questions of compulsory licensing,

It is worth noting that since both the Patent Law and the AML prescribe legal liabilities for anticompetitive conduct, there may be some overlapping jurisdiction between the IP administrative body and the antitrust enforcement agencies regarding the resolution of cases that could result in compulsory licensing.

## 2. Court Enforcement

Since administrative enforcement co-exists with court enforcement, there are two possibilities for private actions in IP and anticompetition cases in China. One is that a private plaintiff may choose to file a civil lawsuit without pursuing an administrative action. The other is that a plaintiff might lodge an administrative lawsuit after the relevant agency has made a decision with which the plaintiff disagrees.<sup>20</sup>

Private actions for IP cases are tried before the Third Civil Division of the Supreme People's Court, the 31 Higher People's Court (which is one level in importance below the Supreme Court and one level above the Intermediate Court) at the provincial or municipality level, and the intermediate courts situated in the capital cities of the provinces, autonomous regions, and municipalities. The second trial is taken as the final appeal.<sup>21</sup> Because of the need for judicial expertise in IP cases, the Supreme People's Court has specially designated 48 intermediate courts and a small number of basic courts as the courts of first instance.

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In comparison with the enforcement of IP laws, where both administrative enforcement and private actions regularly occur, the AML—which has only a short history of enforcement—is expected to be enforced mainly by administrative agencies. But there is the possibility that private actions may be brought alleging anticompetitive conduct involving IP. Indeed, Article 50 of the AML establishes civil liability for antitrust violations.<sup>22</sup> More impor-

tantly, the Provision on the Subject Matter of the Civil Case issued by the Supreme People's Court in 2008 stipulates explicitly that anticompetition cases in IP shall be tried by the Third Civil Division. However, it seems that civil lawsuits against anticompetitive conduct are likely to develop very slowly in China. Indeed, as of this writing, the enforcement mechanism for antitrust lawsuits has not been specified, even though the AML has been in effect for almost one year. It is known that the Third Civil Division of the Supreme People's Court shall deal with antitrust cases but many questions remain: where the first trial shall be placed, what the legal procedures for private actions are, and so on.

### 3. The Draft “Anti-Pricing Monopoly Regulation”

On August 12, the NDRC released for public comment a set of regulations whose stated purpose is “preventing and prohibiting pricing monopoly activities, protecting fair competition and safeguarding the interests of consumers and the public.” Though it is not perfectly clear, these regulations are apt to apply to compulsory licensing of IP by the dominant firm. For the reasons discussed below, the text of the regulations is quite worrisome in this regard and others, though their real effect will be determined more by their enforcement than by their wording.

Article 1 of the Regulation, quoted in part above, suffers from one of the same problems that afflicts the AML itself. The three stated goals of the pricing regulation—prohibiting “monopoly pricing,” “protecting fair competition,” and safeguarding consumer interests—can often be at cross purposes. “Monopoly pricing” may, in the short term strike some as “unfair” and will certainly—again in the short term—result in wealth transfers from consumers to monopolists. But it may also be—will often be—the fair and necessary social price for encouraging and rewarding invention. For the same reason, a dominant firm’s refusal to license its powerful IP to smaller rivals—which effectively places an infinite price on the desired license—may seem unfair to rivals and harmful to consumers, again in the short term. But the social benefits likely to be lost by a regime that is quick to compel licensing on grounds of “fairness”—whatever that might mean—are very likely to be significant.

The draft Anti-Pricing Regulation (“APR”) applies to two types of conduct: (1) monopoly pricing agreements, and (2) abusive monopoly pricing by the dominant firm. In each case, the regulations are troubling in regard to IP licensing, among other things. Articles 6 and 7 presumptively proscribe joint-pricing decisions by competing firms. In many cases of course, joint pricing ought to be suspect, but in some cases—pricing of a new product by joint venture partners, or of a patent package by the members of a patent pool—there can be good reason, and social benefit, from collective-pricing activity. Article 10 of the APR makes it possible for firms engaging in joint-pricing conduct to offer a “reasonable explanation” for their behavior, but at this point it is unclear what kinds of explanations will be deemed “reasonable.”

Articles 11 and 12, which together forbid abusive monopoly pricing by a firm with “a dominant market position,” are more worrisome still. Three of the five described offenses might bear on IP licensing. Article 11 (1) prevents a dominant firm from selling “products” (it is not clear whether the “licensing” of an IP “right” will constitute the ‘sale’ of a “product,” but for present purposes we assume that it will) at “unfairly high prices.” Article 11 (3) prevents a dominant firm, “without valid justification” (a phrase whose meaning is unclear), from “refusing to deal”

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with a counterparty by setting “excessively” high prices. And Article 11 (5) prevents a dominant firm from engaging in any “other pricing conduct” that might—after the fact—be judged “abusive” by the Price Authority.

Article 12 enumerates four factors relevant to the determination whether a dominant firm has in fact sold its products at “an unfairly high price.” The first would ask whether “the selling price is obviously higher than cost;” the second would inquire into whether the selling price has been “increased by a percentage above the normal level, where the cost is basically unchanged;” the third would examine whether the selling price has been increased “by a percentage obviously larger than the increase of the cost;” and the fourth would ask whether “the selling price is obviously higher than that of the same kind of product of other business operators.”

#### IT DOES NOT REQUIRE MUCH LEGAL

#### TRAINING TO SEE THAT THE TERMINOLOGY USED IN ARTICLE 12 IS DANGEROUSLY VAGUE.

development will invariably outweigh the marginal costs of producing the next unit of product. If marginal costs are the relevant measure for Article 12, then every firm with powerful IP will violate it. But Article 12 is silent as to the appropriate measure of cost. It is also silent, as it must be perhaps, as to the meaning of its “obviousness” test, which lies at the heart of the section: “obvious” to whom? “Obviously” high? Obviously “excessively” high? Obviously “unfairly” high? Who can tell? And in a market dominated by the IP of a powerful firm, what is the “normal” pricing level? Is it the monopoly price normally prevailing in that market, or is it instead a hypothetical price that might prevail if the monopoly market were somehow a competitive one? Or is it something else entirely? And if there are no other firms that sell “the same kind” of product (but what does that mean?), does Article 12 not apply?

It does not require much legal training to see that the terminology used in Article 12 is dangerously vague. In the case of a dominant firm with powerful IP, the sunk costs of research and

The last sentence of Article 12 sets out an escape clause that makes the regulation inapplicable when buyers can obtain “the same kind of product or substitutes from other business operators at a reasonable price.” This clause offers no hope, and more confusion, for firms with powerful IP. It will often be the case that they are dominant precisely because they have invented a product for which there is no good substitute. But if there happens to be a competing product available, how can the dominant firm know whether the regulator will decide—after the fact—that its own sale price was “reasonable,” whatever that means. As a more general matter, the escape clause seems superfluous, a truism, since it effectively says that where competitive pricing exists, abusive pricing does not, a declaration that is not particularly helpful to the business community.

The first paragraph of Article 14 prohibits a dominant firm, “without a valid justification,” from refusing to deal with a counterparty by setting an “excessively” high price, which the second paragraph defines as “a price at which the transaction

counterparty could not achieve normal profit after normal production and sales.” Like the preceding sections of the draft regulation, this section depends for its enforcement on terms with no clear or fixed meaning—“normal” profit “normal production and sales”—and consequently leaves the business community without any guidance as to permissible pricing behaviors. At the same time, it grants the regulator an enforcement discretion both dangerously vague and unlimited.

Article 26 is equally unsettling. It provides that the pricing regulation is “not applicable” to business conduct of firms exercising their IP rights “in accordance” with IP law and relevant regulations. The regulation “is applicable”, however, to conduct of firms that “abuse their intellectual property rights to eliminate or restrict market competition.” No definition of “abuse” is set forth, nor is compulsory licensing discussed or described. But the section seems to suggest that IP can be priced “abusively,” and that doing so will offend the APR.

Finally, while the APR proscribes the kind of conduct discussed above, and permits the relevant agencies to punish offending firms in accordance with Section 51 of the AML, it provides no guidance to administrative agencies about how they might establish a regime of “fair” or “normal” pricing, in order to remedy instances of “abusive” pricing conduct. This omission is understandable in a sense: there is no effective way for any administrative agency to act as an ongoing price-setter or adjuster. Far easier is it—misguided, but easier—to punish unfairly “high” prices than to set prices that are “fair,” or at least “fairly” high. To this extent, the APR violates the antitrust maxim that no competition law regime should proscribe conduct that it cannot effectively remedy; and, if unamended, it will present a host of intractable difficulties to regulatory bodies.

If not revised significantly and for the better, the APR will pose a serious roadblock to everyday and socially beneficial conduct. It will impede—and may even seriously punish—proper refusals to license IP. It will require firms to guess at the meaning of words that have no fixed meaning, and to risk liability for being unable to divine their meaning. And it will require the regulator to make critical factual determinations—about pricing levels, “normal” markets—with reference to useful or knowable criteria.

THE APR VIOLATES THE ANTITRUST MAXIM THAT NO COMPETITION LAW REGIME SHOULD PROSCRIBE CONDUCT THAT IT CANNOT EFFECTIVELY REMEDY; AND, IF UNAMENDED, IT WILL PRESENT A HOST OF INTRACTABLE DIFFICULTIES TO REGULATORY BODIES.

## VII. Inadequancies in China's Legal Framework for Compulsory Licensing

China introduced legal rules regarding compulsory licensing in 1984 but there has not yet been a case or decision dealing with this issue, which seems unusual

given the growing number of complaints about IP restraints. One possible reason for the lack of a reported decision is that a contestable case has yet to arise. A more likely explanation may be that China's legal framework is inadequate to deal with the complicated issues involved in claims for compulsory licensing, and particularly with those relating to promoting competition and innovation in the field of IP. While the legal framework is evolving and being improved continuously, the current situation suggests that the main challenges for China's legal rules on compulsory licensing lie in addressing inadequacies in some of the applicable legal standards and in resolving the potential for conflict and confusion arising from overlapping agency jurisdiction.

As described in the last section, Chinese IP laws and competition laws both express the fundamental legal principle that the exercise of IP rights is subject to legal control. More specifically, both the Patent Law and the AML make certain

refusals to license IP remediable by compulsory licensing. But the current IP laws and competition laws still cast some shadow over the enforcement of antitrust rules in the field of IP, in particular regarding the imposition of compulsory licensing, and of the terms on which compulsory licensing might be ordered.

**AN IMPORTANT PROBLEM  
STEMS FROM THE LACK OF  
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CRITERIA FOR ASSESSING THE  
EXTENT TO WHICH THE USE  
OF IP RIGHTS MIGHT  
RESTRAIN COMPETITION.**

An important problem stems from the lack of comprehensive statutory criteria for assessing the extent to which the use of IP rights might restrain competition.<sup>23</sup> Article 55 of the AML stipulates that any anticompetitive conduct in the use of IP shall be regulated by the AML. Article 17 of the AML specifies six categories of restraints on competition, but these categories are general in nature and not placed into the context of IP use. The interpretation by the Supreme People's Court of the Contract Law prescribes, in the context of IP, six circumstances under which a case may be established on account of illegally monopolizing a technology and impeding technical progress. But the interpretation does not discuss some important circumstances. For instance, there is no discussion of patent pools or cross-licensing, which raise important questions about the relationship between IP and competition law. The Foreign Trade Law also pinpoints in the context of foreign trade some IP restraints but again these references offer little guidance about enforcing the AML in IP-related cases.

One may argue that this lack of specificity does not constitute a serious problem as Article 17 (7) of the AML provides that the law shall apply to unspecified restraints on competition. But the vagueness of such a clause is apt to create uncertainty in the business community and to raise the likelihood of enforcement error: both type I and type II errors are more likely because the "unspecified" circumstances are incapable of accurate prediction, may raise difficult factual or substantive questions, and may not be readily amenable to reasoned analysis. Further, since China follows the statutory law tradition and its enforce-

ment capability is still being developed, the specification of circumstances attracting enforcement of the AML is necessary to enhance enforcement efficiency and effectiveness by describing the *prima facie* case and efficiently allocating the burden of proof.

Second, until recently there have been no explicit legal rules governing compulsory licensing in the software industry. As is well known, many IP rights in the software industry are protected by copyright, and compulsory licensing has been one of the controversial issues in the Microsoft cases worldwide. However, neither the Copyright Law nor the Regulation on the Protection of Software, which are the main bodies of law regulating the software industry in China, provides legal rules to deal with competition issues in general and compulsory licensing in particular. For example, it is unclear whether China's competition agencies may require the owner of the interface code of a software system to provide access to its rivals and, if so, under what circumstances and terms. The open access issue can be analyzed under the general guidance of the AML. Indeed, one can analogize a denial of access to a refusal to deal under the essential facility doctrine. But given the specific features of the software industry and the complicated issues involved, it is doubtful that the existing IP laws and competition laws are adequate to deal with such cases.

Third, there are many uncertainties regarding the application of Article 17 of the AML to the field of IP. For instance, Article 17 (1) provides that antitrust liability may be imposed if a seller sets a high price that is unfair. In the context of IP this implies that the licensor cannot set the license fee or royalty at the monopoly price level, even if it has done nothing to restrain competition. This provision is particularly worrisome. Licensees are naturally inclined to complain that license fees are too high; and if their complaints find a receptive audience within the relevant enforcement agency, owners of IP rights will run the risk of being denied adequate compensation for their investments in R&D, which would likely, as discussed earlier, discourage investment in and development of innovations.

As is well known, the central economic feature of innovative activities is that inventors almost always have to incur large amounts of sunk costs, and bear the substantial risk of research or market failure, facts which are often played down by rivals and sometimes by enforcement agencies. Thus, allowing inventors to fully appropriate monopoly rents from successful inventions is necessary to compensate them for their risk-taking and to induce them, and others, to take comparable risks in the future. Indeed, temporary supernormal rents are exactly the incentives necessary for making investments in innovation that dramatically improve consumer welfare, and that spur dynamic competition in invention. Therefore, charging monopoly prices *per se* should not be deemed to violate the AML.

Another problem with Article 17 (1) of the AML is that it may place an IP owner's legal right of exclusion at risk. Article 17 (3) of the AML specifies that

refusals to license IP without reasonable justification are a restraint of competition. However, in many cases refusals to deal may result from the parties' inability to agree on an appropriate fee for the relevant license. Such refusals could also be viewed as equivalent to charging monopoly—or infinitely high—prices. Thus Article 17 (1) and (3), if inappropriately applied, may endanger the exclusionary right of an IP holder, which stands at the center of IP law.

We are not arguing that IP rights are absolute or unqualified, or that all refusals to license are *per se* legal. Rather, we worry about the uncertainties and social harms that may result if these rules are inappropriately applied. Fortunately, the AML has adopted the general principle of rule of reason analysis to assess claims of anticompetitive conduct. This should make it possible to avoid the unfortunate consequences of bad decision-making. But it should also encourage the enforcers of IP laws and competition laws to issue guidelines clarifying these important issues.

Fourth, neither IP law nor competition law specifies a methodology for establishing license fees, in those cases where compulsory licensing is imposed. Article 57 of the Patent Law stipulates that if compulsory licensing is ordered, the licensee should pay “reasonable” usage fees to the licensor, and that those fees shall be negotiated by the licensor and the licensee. If they cannot agree upon a reasonable fee, they can apply to SIPO for an administrative ruling. If they are not satisfied with the ruling, they can file an administrative lawsuit in court. However, no guideline has been released specifying the criteria relevant for either the administrative ruling or the court review. A host of difficult questions exists: what constitutes a reasonable license fee; on what basis should the license fee be determined; should the license fee be cost-based, and if so, on what cost; should

the inventor receive a “fair” return on its initial investment; should payment consist of a lump sum fee, an annual royalty, or a combination of the two—a two-part tariff; and so on.<sup>24</sup>

IN FACT, ORDERING A DOMINANT FIRM TO LICENSE ITS POWERFUL IP TO RIVALS AMOUNTS TO A DECLARATION THAT THE IP IS AN ESSENTIAL FACILITY.

In fact, ordering a dominant firm to license its powerful IP to rivals amounts to a declaration that the IP is an essential facility. Declaring certain IP to be an “essential facility” requires courts or agencies to determine the “proper” amount of the licensing fee, and other terms and conditions of the license, initially and then repeatedly over time. Compulsory licensing necessarily forces the IP and antitrust enforcement agencies to perform the regulatory function of setting prices, a role to which they are ill-suited. As the practice of interconnection pricing demonstrated vividly worldwide, it is a daunting task for regulators simply to set initial access prices (licensing fees), due to the complex tradeoffs that must be made. On the one hand, they may be tempted to set a low licensing fee in order to promote short-term competition (service competition) and thus to enhance short-run consumer welfare. On the other, they may want to set a high licensing price to promote longer-term investment (facilitate-based

competition) and innovation. The tradeoff is complicated by specific features of certain kinds of IP, particularly where the marginal costs of use or production are almost zero, and marginal cost pricing is unremunerative and therefore inefficient.<sup>25</sup>

Finally, there exist potentially serious problems of overlapping and conflicting jurisdiction. SIPO and the competition policy agencies share the enforcement power over anticompetitive conduct involving IP, in particular in regard to imposing compulsory licensing to remedy IP restraints on competition. Indeed, the Patent Law grants SIPO general jurisdiction over compulsory licensing. At the same time, the AML bestows competition agencies with the power to forbid anticompetitive conduct, including unreasonable refusals to deal. This power enables each enforcement agency to explore compulsory licensing as a remedy for refusals to license IP, an arrangement with the obvious potential for administrative conflict that could lead not only to the squandering of scarce administrative resources but also to incompatible enforcement standards.

In addition, there may be overlapping and conflicting jurisdiction among the competition agencies themselves. As described in the last section, the NDRC and SAIC have the power to prohibit monopolistic agreements and abusive conducts in price and non-price fields, respectively. While their respective areas of authority may appear to be separate and distinct, many cases will necessarily involve both price and non-price conduct, creating the potential for jurisdictional conflicts to arise with some regularity. For example, suppose certain competitors agree to create a patent pool. Their agreement provides that each member can use the patents in the pool royalty-free but may not license them to third parties; and that each member may unilaterally license its own (non-pooled) IPRs to third parties but may charge no less than the licensing fee specified in the agreement. Clearly, both refusals to license and price agreements are involved in this case. The NDRC may deal with this case as regards the price agreement, while the SAIC may regulate the non-price conduct. However, it is hard to think of a situation where different enforcement agencies might usefully share jurisdiction over the same case, not least because of the high co-ordination costs involved.

FINALLY, THERE EXIST POTENTIALLY SERIOUS PROBLEMS OF OVERLAPPING AND CONFLICTING JURISDICTION.

## VIII. Relevant Factors in Determining China's Compulsory Licensing Policy

Thus far, we have discussed the basic economic tradeoffs between short- and long-term efficiencies, U.S. and EU case law, and China's legal framework for compulsory licensing in the field of IP. We now move to the analysis of factors necessary to the formation of a coherent compulsory licensing policy in China's context. Fundamental economic principles suggest that imposing compulsory

licensing in China should take due account, but without exaggeration, of special “developing country” issues, including *inter alia*, the high proportion of IP rights granted to non-residents, and current institutional enforcement capacity.

### A. HIGH PROPORTIONS OF PATENTS GRANTED TO NON-RESIDENTS

As in other developing countries, most patented technologies and copyrighted IP practiced in China are developed abroad, in part because of China's current comparative disadvantage in R&D investment. Even though the overall proportion of patents granted to non-residents was only 14.26 percent in 2007, the inventions patented to foreign firms and individuals were 52.99 percent of the total (in China patents are divided into three categories—*inventions*, utility models, and design patents; the latter two types have lower technical content than the first type), while at the same time the percentage of utility model and design patents granted to non-residents was 1.1 and 9.34, respectively (Table 1). This suggests that most patents granted to local residents are utility model and design patents with relatively low technical content, while most patents issued

to foreign companies or individuals have relatively high technical content, and therefore more commercial value. From an economic perspective the distribution of patents granted to residents and non-residents will have a profound impact on the basic tradeoffs involved in establishing a policy for compulsory licensing.

**FROM AN ECONOMIC PERSPECTIVE  
THE DISTRIBUTION OF PATENTS  
GRANTED TO RESIDENTS AND  
NON-RESIDENTS WILL HAVE A  
PROFOUND IMPACT ON THE BASIC  
TRADEOFFS INVOLVED IN  
ESTABLISHING A POLICY FOR  
COMPULSORY LICENSING.**

As discussed earlier, the purpose of the patent system is to provide incentives for firms to invest in R&D by permitting monopoly rents in return for disclosure to the public of the under-

lying technology. But this may not be the primary function of the patent system in China under current circumstances. Since high-value technologies patented in China have mostly been invented abroad where firms make R&D investment decisions based on projected profits from larger markets—typically the United States, EU or Japan—reducing monopoly rents from sales in China might not cost China much in innovation, as lost sales there would likely be small compared to those made in the other countries. Similarly, the information disclosure function of the patent system would not be much affected. Since technologies are usually patented abroad, firms and individuals in China can obtain the relevant information from the patent documents disclosed in those other countries.

But this does not mean that foreign inventors will decline to seek patent protection in China. Since the information contained in foreign patent applications is available elsewhere and to others, if an inventor does not obtain a patent in China, someone else could do so and exclude the inventor from the market. If no one obtains a patent, rents that might have been available will be dissipated because the technology will be used on a royalty-free basis.

Some might suggest that restricting the market power of patents in developing or technology-importing countries could lead to static gains locally—consumers would get something for nothing, or for very little—while the dynamic loss from discouraging innovation or less information disclosure would likely be small. It might seem to follow then that China would benefit from a strategy that provided relatively little protection to IP and that adopted lenient rules that would require more compulsory licensing of powerful IP.

While we can understand this so-called developing country argument, we believe it to be short-sighted and incomplete. First, the profile of the patent grant is changing in China. While until recently, IP rights for most core technologies were owned by foreign companies or individuals, this situation is changing as China becomes more economically developed. Indeed, from 1998 to 2008, more than 50 percent of invention patents were granted to non-residents each year, with the proportion peaking at 72.67 percent in 2002. Since then, however, it has decreased for six consecutive years, falling to 50.28 percent in 2008. Given the trend of China's economic growth and the national strategy to develop an innovation-oriented country, the proportion of patents granted to non-residents is likely to decline further in the future. In fact, while one must be cautious in interpreting the relevant statistics, Table 2 shows that patents granted to residents already constitute a significant part of the total in China: it is still lower than in Japan, France, Germany, and Korea but higher than in the United States and Canada. Under such circumstances the disincentive effect will certainly loom larger in the years to come, a fact that poses a strong challenge to the standard developing country argument.

Second, a parochial approach to IP rights might diminish the long-run attractiveness of China for FDI. In 2007, for example, China received 74.8 billion dollars of FDI,<sup>26</sup> making it the largest recipient of FDI worldwide. This fact may suggest that China has already installed a pro-innovation legal framework for IP protection that has contributed to China's attractiveness to incoming foreign investments and technology transfers. For those who may question the Chinese government's enforcement intentions with regard to IP rights, this high level of investment may suggest that the strength of IP protection is irrelevant to FDI inflow. In fact, strong IP rights alone are not sufficient incentives for firms to invest in a foreign country. They are only one component of a larger regulatory system, which includes tax laws, investment regulations, production incentives, trade policies, and competition rules. However, since weaker protection of IP and the threat of compulsory licensing tend to lower the expected returns of foreign investments, they could well affect FDI in the long run.

Third, adverse selection effects might cause firms with dominant core technologies either to leave China or to refrain from entering. If a foreign firm with

WHILE WE CAN UNDERSTAND  
THIS SO-CALLED DEVELOPING  
COUNTRY ARGUMENT, WE BELIEVE  
IT TO BE SHORT-SIGHTED  
AND INCOMPLETE.

dominant technology expects that its IP may be declared an essential facility and made subject to compulsory licensing, it might well choose to avoid China's market because it would not expect to realize a fair return on investment. Under this circumstance, foreign capital with high technological content would not flow to China, leaving China with only low technical FDI. This result would defeat the main incentive behind efforts to attract FDI, and harm technical progress in China.

SINCE WEAKER PROTECTION OF IP  
AND THE THREAT OF COMPULSORY  
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means of upgrading industries and enhancing its international competitiveness. One could argue that independent (home-grown) innovation is too demanding in terms of funding requirements and technological support. Since China still has a relatively weak technological sector, it can afford only a relatively low level of R&D investment.<sup>27</sup> Thus, some might argue, China should not engage much in independent innovations. But independent innovations include not only original inventions but also integrated innovations, combination innovations, improvement innovations, and in-draft assimilation innovations. Indeed, until recently China has adopted the low-risk bearing innovation strategy of promoting integrated innovations and in-draft assimilation innovations based upon innovations embodied in FDI. In light of this, since FDI would be discouraged by weak IP protection and unwarranted compulsory licensing, independent innovation would be suppressed.

Finally, independent innovation might be suppressed. The developing country argument builds upon the assumption that patents owned by non-residents are disproportionately numerous and more valuable. However, independent innovation is very important for China as a

## B. ENFORCEMENT CAPABILITY

Even if economic conditions might warrant compulsory licensing due to IP restraints on competition, in China the already complex economic tradeoffs are complicated further by enforcement issues. In fact, weak enforcement capacity may counsel in favor of a policy of less compulsory licensing.

First, the legal rules regulating compulsory licensing are inadequate. As discussed earlier, the criteria in the current statutory rules in regard to compulsory licensing as a remedy for anticompetitive conduct are incomplete. Since China follows the statutory law tradition, clear and comprehensive rules are essential to guide and facilitate the enforcement agencies in establishing a *prima facie* case and to place the burden of proof efficiently. Furthermore, confusion and inconsistencies plague China's current competition laws on compulsory licensing. The Chinese government needs to publish regulations and guidelines to address these issues.

Second, the jurisprudence and capability of economic analysis are still being developed. While we have argued that economics has limits in dealing with the

long-term effects of compulsory licensing of IP, we do not mean to suggest that economic analysis has no place in such cases. Among other things, our argument suggests that sound decision-making in the area of compulsory licensing is difficult and complex, and necessarily forces competition agencies to exercise regulatory functions. In fact, as decisions governing compulsory licensing are based on the rule of reason, economic analysis is indispensable to the decision-making process. However, in China economic analysis has come to anticompetition cases only recently; and, as experience in the United States and EU demonstrates, it takes a long time and significant resources in order for competition regulators to develop institutional economic expertise.

Finally, there are problems in the allocation of enforcement responsibilities. One obvious problem is that too many government agencies have jurisdiction over competition policy in IP, particularly as to compulsory licensing. As discussed before, there are potential overlapping and conflicting jurisdictions between the IP administration and competition agencies, and between the competition agencies themselves. Indeed, the existence of overlapping and conflicting jurisdiction, coupled with a lack of clarity as to the particular responsibilities of the relevant administrative agencies, is often an institutional problem in China that hinders the efficiency and effectiveness of law enforcement.

Another governance problem is the absence of institutions that might ensure independence of decision-making on issues pertaining to the compulsory licensing of IP. As we have argued, compulsory licensing of IP is a complex and subtle issue not only because there are complicated economic tradeoffs to make but also because other, non-economic factors might influence the decision-making process. Under such circumstances good governance is especially necessary to ensure commitment to independent decision making.

ONE OBVIOUS PROBLEM IS THAT  
TOO MANY GOVERNMENT  
AGENCIES HAVE JURISDICTION  
OVER COMPETITION POLICY IN IP,  
PARTICULARLY AS TO  
COMPULSORY LICENSING.

## IX. Conclusions and Recommendations

The question of whether and on what terms to require dominant firms to license their powerful IP to rivals lies at the center of the intersection between antitrust and IP law. Not only is it extremely important, but it is also beyond the competence of economics to answer. It is one of those few but crucial problems that seem intractable to economic analysis, and that therefore require antitrust regulators and problem-solvers to draw on local history and politics and culture, in order to formulate answers. If this prospect is unsettling, because it is indeterminate and relative, it is nevertheless unavoidable (which may also be unsettling), since no better method for solving these problems exists.

Most of the problems arising in competition law can best be solved using accepted methods of economic analysis. For most countries, in the large majority of cases, and for the vast majority of businesses, a competition law regime driven mainly by political principles and concerns would be confusing and inconstant, and would thus deter more competition than it protected. Newer competition law regimes should be encouraged to use all of the economic tools available to the more experienced regulators. But as to some issues—again, those discussed here, in which economics lacks explanatory power—developed competition law regimes seem to lack an objective basis for arguing that the history and politics of their own countries or regions should serve as the universal or international standard. As to those issues, newer regimes should presumably be largely free to develop their own answers on their own terms, but with reference to

and regard for the approaches of more experienced and developed systems.

**FOR THOSE PROBLEMS,  
POLITICS AND HISTORY—MESSY,  
INDIVIDUATED, IDIOSYNCRATIC,  
AND UN-SCIENTIFIC—are the  
ANSWERS OF LAST RESORT.**

There are limits to economics, even in a field as heavily and beneficially influenced by that discipline as competition law. Even after three decades of growing influence, during which economics has reshaped and refined competition law in the United States and Europe, some of the law's most important problems—compulsory licensing among them—remain resistant to economic analysis. For those problems, politics and history—messy, individuated, idiosyncratic, and un-scientific—are the answers of last resort. But they have limits as well: no one answer fits all countries; different legal systems cannot completely converge; the respective values of older systems and newer ones might conflict; and many inventing companies have invested large sums in research in reliance on the legal protections afforded them by their national competition law regimes.

In China's context, since compulsory licensing of IP is so complicated and subtle an issue, it may be too soon to recommend any specific approach. Certainly, more discussion and research are needed. However, certain preliminary steps should be taken. First, the Chinese authorities regulating issues involving IP and competition law should issue specific regulations and guidelines to clarify the meaning and likely application of the legal rules guiding law enforcement. Second, the administration of law enforcement should be improved to facilitate the co-ordination of enforcement agencies, avoid conflicts between them, and ensure their independent decision-making on compulsory licensing. Finally, efforts to build capacity in law enforcement should be stressed. ▶

**Table 1**

**Patents Granted  
to Non-Residents  
in China (%)**

	Total	Invention	Utility Model	Design Patent
1985	19.57	5.00	6.67	55.26
1986	11.67	7.14	2.06	67.81
1987	6.02	26.30	1.58	33.49
1988	5.47	39.80	0.76	23.12
1989	9.63	52.97	1.00	22.31
1990	14.54	70.06	1.23	21.52
1991	13.97	68.20	0.73	15.79
1992	10.05	65.05	0.46	13.74
1993	8.44	59.82	0.51	12.17
1994	8.13	57.28	0.63	16.50
1995	8.47	54.91	0.91	14.97
1996	7.87	53.14	0.59	12.48
1997	9.03	56.15	0.57	12.34
1998	9.59	65.03	0.55	11.10
1999	8.04	59.45	0.49	8.97
2000	9.60	51.30	0.61	8.62
2001	13.11	66.89	0.63	8.56
2002	15.33	72.67	0.68	8.04
2003	17.91	69.31	0.89	8.24
2004	20.45	63.04	0.86	10.23
2005	19.81	61.16	1.53	10.54
2006	16.47	56.60	1.25	9.84
2007	14.26	52.99	1.10	9.34
2008	14.46	50.28	0.85	7.74

World Patent Report: a Statistical Review 2008, WIPO Statistics Database.

**Table 2**

Patents Granted to Non-Residents by Office in 2007 (%)		
	Japan	15.85
	France	13.95
	Germany	21.54
	Republic of Korea	25.38
	Russian Federation	30.26
	United Kingdom	30.50
	China	37.57
	United States of America	47.09
	New Zealand	75.88
	Norway	81.62
	Thailand	36.82
	Canada	87.55
	Australia	90.06
	Singapore	93.01
	Mexico	96.21
	Hong Kong (SAR), China	98.84

Source: World Patent Report: a Statistical Review 2008, WIPO Statistics Database.

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- 1 XIANTAO HUANG, *PATENT: STRATEGY, MANAGEMENT AND LITIGATION*, at 3 (2008).
  - 2 We do not attempt to have an exhaustive survey of the literature on economics of compulsory licensing. Please see DOJ and FTC, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*, 2007 and the references therein.
  - 3 If rent-seeking is considered, the social loss approaches to the producer surplus. If the transaction cost of rent-seeking is taken into account, the social cost is even higher. There are other short-run inefficiencies as well, which are analyzed in a large literature on economics of open access to essential facilities. For a good summary, see JEAN-JACQUES LAFFONT & JEAN TIROLE, *COMPETITION IN TELECOMMUNICATIONS* (2000). In the intellectual property context, an obligation to open access to the property is equivalent to a requirement for compulsory licensing. Because of this access requirement, compulsory licensing also may reduce efficiency in the short run by facilitating the entry of inefficient producers and by promoting licensing arrangements that result in higher prices.
  - 4 Compulsory licensing is not the only remedy of abuse of IPRs. Changing the breadth of IPRs can make inventing around easier.
  - 5 Aspen Skiing Co. v Aspen Highlands Skiing Corp, 472 U.S. 585 at 608.

- 6 Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. at 409.
- 7 SCM Corp. v. Xerox Corp, 645 F.2d 1195, at 1209.
- 8 Image Technical Services v. Eastman Kodak, 125 F.3d at 1218.
- 9 That is, by committing fraud on the patent office, see Walker Process, 382 U.S. 172.
- 10 C-97/7 Oscar Bronner v Mediaprint (1998) ECR I-7791, (emphasis supplied).
- 11 Trinko, *supra* note 6.
- 12 Scalia, J., concurring in Bendix Autolite v. Midwesco Enterprises, 486 U.S. 888, 897 (1988).
- 13 After 30 years of efforts, China has created a legal system that is in accordance with international practice. The Trademark Law, the Patent Law, the Copyright Law, Regulations on Computers Software Protection, Regulations of the People's Republic of China on Customs Protection of Intellectual Property Rights, Regulations of the People's Republic of China on Protection of New Varieties of Plants, The Regulations on the Protection of Right of Dissemination via Information Network, Regulations on Collective Copyright Management, Regulations on the Protection of Layout-Designs of Integrated Circuits, Regulations on Protection of World Exposition Symbols, Regulations on Protection of Olympic Symbols, Regulations on Protection of Traditional Arts and Crafts constitute the main body of China's IP laws. In addition, General Principles of the Civil Law also contains rules on IP protection.
- 14 Article 22 of the Copyright Law enacted in 2001 did provide rules on compulsory licensing but they were unrelated to competition concerns. Regulations for the Protection of Computer Software published in 2001 did not contain explicit rules on compulsory licensing.
- 15 For more detailed account of the evolvement of compulsory licensing of IPRs in China please refer to LIN, XIUQIN, PATENT COMPULSORY LICENSING UNDER THE TRIPs AGREEMENT (2006).
- 16 The Patent Law of the People's Republic of China. (...the Patent Administration Department under the State Council may... grant a compulsory license for the exploitation of an invention patent or utility model patent: (1)... ; or (2) The patentee's act of exercising the patent right is determined as monopoly in accordance with the law and the negative impact of such an act on competition needs to be eliminated or reduced.)
- 17 Regulations on the Protection of Layout-Designs of Integrated Circuits (...that there is unfair competition on the part of the holder of the right of layout-design and there is a need to give remedy, the intellectual property administration department of the State Council may grant a non-voluntary license to exploit the layout-design.)
- 18 Interpretation of the Supreme People's Court Concerning Some Issues on the Applications of Laws for the Trial of Case on Disputes Over Technology Contracts.
- 19 Article 47 of AML stipulates that where any business operator abuses its dominant market status in violation of this Law, it shall be ordered to cease doing so.
- 20 Article 58 of the 2008 Patent Law stipulates that if the holder of IP rights is not satisfied with the compulsory licensing decision made by the SIPO, it can start an administrative lawsuit against it. Similarly, Article 53 of the AML provides that where any party concerned objects to the decision made by the antimonopoly authority in accordance with this Law, it may first apply for an administrative reconsideration; if it objects to the reconsideration decision, it may lodge an administrative lawsuit in accordance with law.

- 21 Before 1990s, there was no special trial court for IP cases. Rather, the cases were divided as civil, criminal, and administrative cases and reviewed by the civil division, the economic division, and the administrative division, respectively. In 1993 the Beijing Intermediate People's Court created the first division dealing with civil and administrative IP cases. In 1996 the Shanghai Supreme People's Court established the IP trial division dealing specifically the cases of second instance and a trial *de novo*. In 2000 the Supreme People's Court restructured the IP Division to the Third Civil Division, which is called the IP Division by outsiders.
- 22 See Article 50 of the AML (where any loss was caused by a business operator's monopolistic conducts to other entities and individuals, the business operator shall assume the civil liabilities.)
- 23 XIAOYE WANG, COMPETITION LAWS IN COMPULSORY LICENSING OF IP (2007) (Arguing for provision of complete criteria of circumstances of IP restraints in China's laws.)
- 24 Michael L. Katz & Carl Shapiro, *On the Licensing of Innovations*, 16(4) RAND at 504-520 (1985); Morton I. Kamien, Shmuel S. Oren, & Yair Tauman, *Optimal Licensing of Cost-reducing Innovation*, J. MATH. ENG. 21, at 483-508 (1992).
- 25 Reiko Aoki & John Small, *Compulsory licensing of Technology and the Essential Facility Doctrine*, 16(1) ECONOMICS WORKING PAPER SERIES (2004) (Arguing that charging royalty, which is at odds with the marginal cost pricing principle, may be more efficient.)
- 26 *China Statistic Yearbook 2008*, National Statistic Bureau, China Statistic Press.
- 27 For example, China's R&D investments in 2006 are 50.1 billion dollars, which are 0.96 percent of GDP. In contrast, the U.S., Japan, and Korean's R&D investments are 285, 131.7, and 22.4 billions dollars and 2.52 percent, 3.28 percent, and 2.17 percent of GDP, respectively.