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By Dennis Lu and Guofu Tan¹

Since the introduction of China's Anti-Monopoly Law in 2008, private litigation has been increasing in the areas of monopolistic agreements and abuses of dominance. In addition, China's Supreme People's Court recently issued its judicial interpretation concerning the application of the law in order to offer some guidance in resolving private disputes. The purpose of this paper is to explain how competition economics can help to provide evidence in these private litigations. We discuss how the Anti-Monopoly Law and the judicial interpretation seem to take a rule of reason approach, as well as what roles economic analyses and economists may play in related litigation. We describe the economic evidence being used and accepted in recent Chinese cases that have reached the Chinese courts of appeals and further provide our views on what other evidence could have been offered in these cases.

I. INTRODUCTION

In 2008, China introduced its *Anti-Monopoly Law* (AML), possibly as a way to further competition in its economy. Even as public enforcement of the law develops, private litigation has become a fast-growing area.¹ Complementing this growth, China's Supreme People's Court issued its judicial interpretation (JI), the *Provisions on Several Issues Concerning the Application of the Law in Adjudication of Monopoly-Related Civil Disputes*, on May 8, 2012, in order to offer some guidance in resolving private disputes.² A challenge in enforcing the law is the need to develop supporting evidence, which requires an understanding of how business firms behave and compete. The field of industrial organization in economics helps to address this need.³ Its general focus is on the theory of the firm and business strategies; it expands the standard textbook model of perfect competition to imperfect competition, accounting for such more realistic factors as product differentiation, strategic interactions, and choice dynamics.⁴ Supporting evidence for litigation can then be developed from these factors, as well as from reasoning in this field. The purpose of this paper is to explain how economics, particularly antitrust economics, can help to provide evidence in the context of new and evolving private antitrust litigation in China.

The private provisions of the AML contain two types of acts that may be considered violations of the law: monopolistic agreements and abuses of dominant market positions. A key aspect of the JI relates to the burden of proof for litigation under these provisions. With respect to some monopolistic agreements, once the plaintiffs have shown that such an agreement exists, the JI allows for the defendant to prove that there has been no elimination or restriction to competition. As for cases involving abuse of dominant market positions, the JI states that the plaintiff has to prove that the defendant has a dominant market position in the relevant market, and that the defendant has abused said position through certain acts, although the JI does allow the defendant to justify its acts.

Section II of the paper discusses how the AML and the JI seem to take a rule of

reason approach, attempting to evaluate competitive effects of the alleged act.⁵ In evaluating the competitive effects, economic reasoning may apply and offer methods of how to support claims from both plaintiffs and defendants. The AML seems intended to prevent monopolistic agreements that harm consumers and society. But then, economic theory can explain why there may be agreements that raise prices, as well as the conditions under which these agreements may arise. More important, litigants can use these explanations and possibly observe the conditions as support for their claims. So, economics can be useful in providing evidence as to whether or not there has been elimination or restriction of competition associated with alleged agreements.

The law also seems intended to prevent firms from harming consumers and society through abuse of their dominant market positions. The intuition behind the abuse of dominant market position is that firms with large market shares have greater ability to raise prices than smaller firms. The rule of reason approach, based on economic analysis, suggests that this intuition may not necessarily hold. Through defining relevant (product and geographic) markets and evaluating alleged dominant market positions, economic theory can help to explain those situations when large firms may or may not have the ability to raise prices. For example, potential entry can prevent incumbent firms from raising prices regardless of their size. Observing that there are potential entrants may support claims that a large firm cannot abuse its dominant market position. The law seems to take a direct rule of reason approach by describing most acts as only constituting violations if there are no justifiable causes for using them.

With the role of economics following a rule of reason approach in the AML and II, we also discuss the possible roles of economists. Generally, antitrust economists have the necessary training to help delineate relevant markets, estimate competitive effects, calculate damages, and so forth.⁶ A team of specialized economists may be more suitable in litigation, because their diverse expertise may better address the range of economic analyses needed.

Section III of this paper describes the economic evidence being used and accepted in recent Chinese cases. China's private litigation experience under the private provisions of the AML is relatively low at this point. As far as we are aware, there are only three decisions that have been reached and upheld by the Chinese appeals courts. In all three cases, the plaintiffs were not successful. To learn from these decisions, we will explore these cases in terms of the evidence that has been accepted or rejected, while adding what other evidence or arguments either the plaintiffs or defendants could have offered.

Section IV concludes with a summary of our discussions.

II. RULE OF REASON AND ECONOMIC ANALYSES

The legal framework behind the civil provisions of the AML seems to require a rule of reason approach.⁷ Even if the plaintiffs can prove the use of prohibited acts, harm to consumers and society is not presumed. Instead, the defendant may be able to argue that the acts had beneficial consumer effects. The rule of reason approach requires a balancing of the benefits against the harms. Economics provides reasoning and tools to help guide practitioners with evaluating the benefits and harms of firms' actions.⁸

Following the rule of reason approach, we now discuss in some detail how economics

plays a role in providing evidence in support of those elements of the provisions of the AML involving monopolistic agreements and abuse of dominant market position.

A. Monopolistic Agreements

Agreements among firms at the same level of production (that provide similar products or services) are usually treated as horizontal agreements, and agreements among firms at different levels of production are treated as vertical agreements.⁹ The AML identifies certain types of horizontal agreements in Article 13, as well as resale price maintenance (RPM) agreements in Article 14, as monopolistic. RPM agreements are a type of vertical agreement. A general concern with either of these agreements is that they may eventually lead to higher prices for consumers.

1. Horizontal Agreements

Article 13 of the AML generally describes horizontal agreements among competitors, stating the following:

“Any following agreements among the undertakings competed with each other shall be prohibited: (i) fix, or change prices of products;(ii) limit the output or sales of the products; (iii) allocate the sales markets or the raw material purchasing markets; (iv) limit the purchase new technology or new facilities, or the development of, new products or new technology; (v) jointly boycott transactions; (vi) other agreements identified by antimonopoly authorities. Agreements referred to this law are agreement, decision or concerted action which eliminates or restricts competition.”

While the evidentiary threshold for proving horizontal agreements is subject to legal debate, economics can explain the incentives behind horizontal agreements. Economists typically use game theory to explain why firms would want to collude, and they have empirical methods to possibly detect collusion.¹⁰

Sometimes, detection is easy, because the horizontal agreements are public, although the incentives may not be clear. Economics can identify the incentives necessary to explain why competition is not restricted or eliminated. Consider the following the US case, *BMI v. CBS*, in which the plaintiffs American Society of Composers, Authors, and Publishers and Broadcast Music Inc. issued a blanket license for all their copyrighted materials.¹¹ The defendant Columbia Broadcasting System responded by suing the plaintiffs for price fixing.¹² The US Supreme Court ruled that this case was not *per se* illegal and must be considered under a rule of reason approach. In particular, the license was not to restrict competition, but rather, to save on transaction costs. Essentially, the economic incentive for the horizontal agreement by the defendants in this case comes from transaction costs. Given that each individual plaintiff’s licensing fees are relatively small, collection of these fees would be prohibitively costly. By identifying the incentives behind the horizontal agreement, we can explain the effects of the agreement. In general, the plaintiffs were not competing before their agreement, since they would not have been paid for their services. Since there would have been no competition if the defendants did not collude, one could argue that the horizontal agreement has not eliminated or restricted competition.

When horizontal agreements are hidden, detecting them can be challenging. Competition authorities may become aware of illegal agreements through complaints and leniency programs.

Private suits can follow the agreements detected by competition authorities.

In addition, economic analytical tools are available for detecting monopolistic agreements. Empirical analysis may be used to detect how price increases over time (or across different markets) may occur, while not attributing the increases to changes in market conditions, such as cost increases. A possible explanation is that the price increases are due to behavioral changes, such as firms agreeing to fix their prices. Another venue for detection comes from estimating current demand functions and then calculating and comparing theoretical prices for a monopoly and a competitive market. If observed prices are similar to the calculated theoretical prices for a monopoly, rather than to those for a competitive market, then a possible explanation is that there exist horizontal agreements.¹³

An advantage of using economic analyses for detecting horizontal agreements is that they can be extended to estimate damages. Essentially, these analyses provide estimates of prices before and after an agreement. The overcharge due to the agreement is the difference between the before and after prices. Since purchasers affected by this agreement can certainly show how much they bought, the total damages can be estimated by multiplying the overcharge by these amounts.¹⁴

2. Resale Price Maintenance Agreements

Different from horizontal agreements, Article 14 of the AML treats RPM agreements as violations:

“Any following agreements among undertaking and counterparty are prohibited: (i) fix the price for resale; (ii) restrict the lowest price for resale; (iii) other monopolistic agreement identified by antimonopoly authorities.”

Since RPM agreements are a form of trading agreement, the focus of Article 14 seems to be on how the agreements maintain pricing, which is the basic tenet behind making price fixing illegal. To illustrate how RPM agreements may result in higher prices, consider the following example. A high-end watchmaker may want its dealers to set prices higher than what the dealers prefer (minimum RPM). Despite higher prices, consumers may still benefit from the minimum RPM agreement if the dealers compete by offering better services.¹⁵

Decisions from the US Supreme Court suggest a rule of reason for RPM agreements. In *State Oil Co. v. Khan*, the defendant was a gasoline wholesaler who used maximum RPM to prevent the plaintiff, a gasoline retailer, from raising its prices.¹⁶ Contrary to the plaintiff's *per se* claim, the US Supreme Court ruled in favor of the defendant by taking a rule of reason approach, noting that maximum RPM removes successive mark-ups at each level of distribution.¹⁷ The same approach was taken in *Leegin v. PSKS*. The defendant manufactured leather products and wanted to maintain its brand through quality by suggesting a retail price. The plaintiff was a retailer who sold the defendant's products below the suggested retail price. The defendant responded by refusing to deal with the plaintiff, who then took a *per se* claim of minimum RPM to the courts.¹⁸ The US Supreme Court accepted the defendant's rule of reason argument that there are other ways to compete besides using prices.¹⁹

Economics is embedded in the rule of reason approach toward RPM, since it can offer theoretical reasoning and demonstrate empirical measures of harm from RPM. Detection

of RPM is usually not problematic, as the plaintiffs are parties of the RPM agreements. The plaintiffs may accept these agreements for various reasons, such as being uninformed, but then apply to the courts later for relief. If plaintiffs or consumers are adversely affected by the RPM agreements, we can use the same methodologies as described earlier concerning horizontal agreements to estimate harm and damages.

3. Agreements that Eliminate or Restrict Competition

Article 7 of the JI complements Article 13 of the AML by stating that, if the plaintiff is able to prove the existence of a horizontal agreement under this article, the defendant can rebut by showing that there has been no elimination or restriction of competition. Even though the JI does not discuss Article 14 of the AML, RPM agreements can be defended in the same manner. However, it is not clear who bears the burden of proof—though a recent lower court decision on RPM seems to suggest the plaintiff.

In *Rainbow v. Johnson & Johnson*, the intermediate court ruled that the mere existence of an RPM agreement is not enough to support a violation of Article 14 of the AML.²⁰ The court also seems to suggest that the plaintiff should provide support for the elimination or restriction of competition. Specifically, that support can come in terms of market shares in relevant markets, competition among suppliers and distributors, or the effect of the RPM on prices and supply. The reasoning behind the court's suggestion appears to be as follows: If the defendant has relatively low market share, it is not clear how RPM can eliminate or restrict competition. Later, we will discuss how economics can be used to define relevant markets and calculate market share in the subsection on abuse of dominant market position. As for competition among suppliers and distributors, if there are many firms in their respective markets, then the exit of one firm due to lack of profits as a result of RPM, such as the plaintiff, may not have any effect. Competition can come from prices, but also in other dimensions, such as services. While minimum RPM may result in higher prices, competition in services may result in more supply, yielding an environment where customers are willing to buy more because they may benefit from better services.

Article 15 of the AML has a non-exhaustive list of reasons why agreements may not eliminate or restrict competition. Some of the exempted agreements seem to be welfare-increasing, in that they may improve technology or research and development, upgrade quality, reduce costs or improve efficiency, unify standards, and so on. In the US, for example, in *Texaco and Shell Oil v. Dagher*, the defendants were two oil companies that had set up a joint venture to process and distribute their gasoline, as well as to unify their pricing.²¹ In response, the stations selling the defendants' brands of gasoline sued the defendants for *per se* price fixing. The US Supreme Court followed a rule of reason approach in declaring that the joint venture was not a price fixing scheme, since there were still other significant competitors besides the defendants. The implication of having other significant competitors is that competition is certainly not eliminated—and likely not restricted, either.

While economic analysis with respect to competition can be applied to some of the exempted agreements, other agreements are exempted for possibly different reasons, including: a) industrial policies, such as agreements allowing small and medium firms to improve efficiency and enhance competitiveness, as well as enabling firms to cope with economic depression or loss

in sales volume; b) public interest policies, such as agreements dealing with energy savings and environmental protection; c) trade policies, such as agreements with foreign entities and foreign trade; and d) any agreements approved by State Council or by National People's Congress (or by law).

An added qualifier from Article 15 of the AML for exempted agreements is that consumers benefit in some ways, and competition is not fully eliminated in the relevant market. While vague in terms of how much consumers must benefit, this qualifier really bans agreements that lead to a monopoly and result in price increases. So, such an agreement can still be beneficial to society, but not necessarily to consumers. Banning the agreement then suggests that a "consumer surplus" standard is applied in the monopolistic agreement provisions of the AML.²² Agreements leading to a monopoly must somehow benefit consumers.

Before we begin our discussion on abuse of dominant market position, we want to note that estimating damages and liability for abuse cases is generally the same as estimating damages for cases of monopolistic agreements. While detection of abusive practices is not an issue, since these are often observable, the analyses for detecting monopolistic agreements may be applied in order to determine the before and after prices. Afterwards, damages can be calculated in the same manner.

B. Abuse of Dominant Market Position

The rule of reason approach also extends to Article 17 of the AML, which states the following:

"Undertakings with dominant market positions are prohibited from committing any of the following acts that abuses dominant market positions: (i) selling products at unfairly high prices or buying products at unfairly low prices; (ii) without valid reasons, selling products at prices below cost; (iii) without valid reasons, refusing to trade with trading partners; (iv) without valid reasons, restricting trading partners to only trade with the undertaking or undertakings designated by the undertaking; (v) without valid reasons, tying products or imposing other unreasonable trading conditions during the deals; (vi) without valid reasons, applying differentiated treatment in regards to transaction conditions such as trading prices to equivalent trading partners; or (vii) other abuses of dominant market position determined by the Anti-Monopoly Law Enforcement Authority under the State Council."

ACCORDING TO ARTICLE 8 OF THE JI, THE PLAINTIFF MUST FIRST ESTABLISH THAT THE DEFENDANT HAS A DOMINANT MARKET POSITION THROUGH MARKET SHARES IN ORDER TO CLAIM A VIOLATION OF ARTICLE 17 OF THE AML. THIS LOGIC REQUIRES THAT THE PLAINTIFF ALSO BEAR THE BURDEN TO DEFINE THE RELEVANT MARKETS.

According to Article 8 of the JI, the plaintiff must first establish that the defendant has a dominant market position through market shares in order to claim a violation of Article 17 of the AML. This logic requires that the plaintiff also bear the burden to define the relevant markets. Without establishing the relevant markets, calculating market shares and by extension, finding market dominance is both arbitrary and uninformative. Standard methodologies from

antitrust economics can be used to define the relevant markets. The AML does offer market share thresholds to support dominant market positions, but it also allows the defendants to prove evidence otherwise. A usual economic focus is that a firm with dominant market position

has the ability to raise its prices above competitive levels, so the defendant may be able to rebut evidence of its high market shares with its lack of ability to charge supra-competitive prices.

Article 8 of the JI states that the plaintiff must also show evidence of how the defendant's act abuses its dominant market position, but the defendant can rebut by invalidating the plaintiff's claims of abuse. Article 17 of the AML describes some acts that may be considered abusive, but it generally also states that the acts must not have any justifiable causes. Economics can provide conditions under which the described acts may or may not result in any adverse effect to consumers and society. If observable, these conditions can be used as evidence by the plaintiffs or defendants. An act that seems adverse to competitors may actually be beneficial to consumers or society. Similarly, a possible justifiable cause for an act is that consumers or society may benefit from the act.

Given the rule of reason approach, we now offer some detailed steps on assessing abuse of dominant market position.

1. Market Definition

Defining the relevant market is required as a point of reference for evaluating a claim that a firm has a dominant market position.²³ For example, a soft drink manufacturer may account for all soft drinks sold in a local area, but still have relatively few sales outside the area. Depending on how the relevant market is defined, the soft drink manufacturer may have 100% market share of soft drinks in the local area, but its market share may be much lower when a larger area beyond the local area is considered.

In order to define relevant markets, we turn for guidance to the Anti-Monopoly Commission of State Council's *Guidelines on Relevant Market Definition* (GRMD), released on May 24, 2009. There are two elements associated with relevant markets: relevant product market and geographic market. Article 10 of the GRMD explains the key concept behind market definition: the hypothetical monopolist test. Starting with a product (or an area), the test asks whether a (hypothetical) monopolist is able to profitably raise prices above a given threshold, such as 5%. If so, then the product can be considered the relevant product. If not, another product is included, and the test is repeated until the hypothetical monopolist is able to do so.²⁴

The intuition behind the test comes from understanding consumer behavior, which can help to explain how consumers may value products through their willingness to pay or to substitute across different products. Demand estimation provides possible measurements of consumer behavior. The purchase decisions by consumers act as price discipline: If a firm attempts to raise its price, consumers can simply choose not to buy from the firm by either stopping their consumption of the firm's product, or by substituting to a different product.

Given how consumers behave when there are substitutes, we know that the incentive for a firm to raise its prices depends on how close are substitute products or services. In theory, we can compare prices when the substitutes are controlled by one firm (a monopolist), as compared to independent firms. Of course, the monopolist will increase prices. But the key observation here is that the monopolist's price increases should be relatively higher when the substitutes are relatively closer. Raising price for a product will result in lost sales to substitutes: The closer the

substitutes, the greater the loss in sales. By controlling the substitutes, a monopolist will be able to recapture this loss in sales: The greater the loss in sales, the higher the price increase.²⁵ By choosing a threshold for the monopolist's price increases, we are then choosing a threshold for which substitutes are close enough to be in the same relevant market.

While the hypothetical monopolist test offers a conceptual approach, its application has challenges. Legal documents, such as guidelines, are typical sources for applying this test, but these formal descriptions can be, and have been, subject to different interpretations.²⁶ The hypothetical monopolist's behavior is not clear, in that the price increases need to be either profitable or profit-maximizing. Following economic theory, recent interpretation suggests that the behavior should be profit-maximizing. When choosing products or areas to test, one issue is determining which product (or area) should be used as a starting point. For example, the product can be defined broadly or much more narrowly (all colas versus diet colas, for example). Choosing which substitutes to test is also subject to debate, as there is no clear cut way to rank how close the substitutes are. In addition, the substitutes may have asymmetric demands. There are also lingering questions about both how long the hypothetical monopolist should be able

AS AN ALTERNATIVE TO QUANTITATIVE EVIDENCE, ARTICLE 8 OF THE GRMD SUGGESTS THE FOLLOWING AS QUALITATIVE EVIDENCE FOR PRODUCT MARKET DEFINITION: CONSUMER RESPONSES IN TERMS OF PRODUCTS TO PRICE CHANGES, PRODUCT CHARACTERISTICS, PRICE VARIANCES, AND HOW PRODUCTS ARE DISTRIBUTED.

to sustain a price increase, and how much of a price increase there should be.

Resolving these challenges, the test can be applied quantitatively. Studying how price movements change across products or areas may indicate whether they are in the same relevant markets. For example, two products having the same price increases and decreases over a long period of time may indicate that they are close enough substitutes to be in the same relevant product market. But we also have

to ensure that the movement is due to the competitive environment and not to other factors, such as similar input prices. We can use demand estimates or similar variables that measure how sensitive consumers are to switching among substitutes when there are price changes, and then calculate the hypothetical monopolist's profit maximizing price relative to a benchmark price. However, we need to be careful here, as current prices may not be competitive.²⁷

As an alternative to quantitative evidence, Article 8 of the GRMD suggests the following as qualitative evidence for product market definition: consumer responses in terms of products to price changes, product characteristics, price variances, and how products are distributed. Similarly, Article 9 of the GRMD offers the following as possible qualitative evidence for geographic market definition: consumer responses in terms of areas to price changes, transportation costs, consumer locations, and trade barriers.

2. Dominant Market Position

After properly defining the relevant markets, we now turn to the issue of dominant market position. Article 18 of the AML states that:

“The dominant market position of an undertaking shall be determined based on the following

factors: (i) the market share of the undertaking and the competition status in relevant markets; (ii) the ability of the undertaking to control the sales market or the purchase market of raw materials; (iii) the financial and technical conditions of the undertaking; (iv) the degree of the reliance on the undertaking by other undertakings in transactions; (v) the difficulties for other undertakings to enter relevant markets; and (vi) other factors relating to the determination of dominant market position of the undertaking.”

The article alludes to market share as a factor in determining dominant market position. Moreover, Article 19 of the AML presumes dominant market position by market shares: more than 50% for one firm, 66.6% for two firms, and 75% for three firms.

While the GRMD does not discuss how to calculate market shares, we offer some suggestions: References should be made to the shares of all sellers identified as the participants in the relevant market.²⁸ Explanations of how shares are calculated over different units may differ. The relevant unit for market share calculations can be in terms of revenues (dollar sales), volume (unit sales), capacity, or even reserves. However, these choices are likely to be restricted by the availability of data. For example, participants in network markets may have the same capacity but different density, which implies different revenues or volumes. Depending on the nature of competition, capacity may or may not be the right measure. For instance, while capacity may be the right measure for two local phone service providers with identical networks, it may incorrectly measure two competing trucking firms operating in different areas within the same road network. In two-sided markets, having a large market share on one side may not necessarily imply having a large market share on the other side.²⁹

Article 19 of the AML allows for defendants to rebut the claim of dominant market position:

“When the undertakings assumed to have a dominant market position can prove that they do not have a dominant market position, shall not be assumed to have a dominant market position.”

Article 8 of the JI supports this allowance by stating that the defendants have a right to defence of justifiable conduct. While the ways this article may be used for rebuttal is subject to the courts, the focus of antitrust litigation is usually on market power. Market share is often used to infer the degree of market power.³⁰ Loosely speaking, market power is the ability of a firm to profitably raise its price above either the competitive level or the marginal cost. The defendant can argue that it may have a relatively large market share, but it does not have the ability to raise prices, due to the possibility of entry from potential competitors or to countervailing power from its customers. If the defendant increases its price, there will be entrants attracted by the higher price, and competition will eliminate any price increases. Similarly, customers may be able to successfully threaten the defendant from raising prices.³¹

3. Acts that Abuse Dominant Market Positions

With dominant market position established, acts that abuse the position must be supported by evidence. Economic theories do offer explanations as to how some of the acts, as described by Article 17 of the AML, may or may not be anti-competitive. We also note that Article 17 of

the AML offers a non-exhaustive list of possible abusive acts, and that industrial economics is constantly evolving. Hence, new theories may shed further insights into the competitive effects of other practices that may abuse dominant market positions.

Article 17(1) starts by depicting the act of “selling products at unfairly high prices or buying products at unfairly low prices.”³² Since such an act deals with the principle of fairness, economics may not be much helpful in terms of supporting evidence. Economics can help in objective measures of efficiencies, but not subjective measures of equity.

Article 17(2) mentions the next act, which is that of “selling products at prices below cost.”³³ Predatory pricing theories in economics offer explanations of how firms can benefit from using low prices to first drive out competitors, and then raise prices later at the expense of consumers. In the US, in *Matsushita v. Zenith*, two US electronics manufacturers filed a lawsuit against seven Japanese electronics manufacturers for colluding for over 20 years. The US Supreme Court ruled in favor of the defendants, since the claim of collusive predation simply made “no economic sense.” The reason came with an economic perspective: Firms are unlikely to lose profits for over 20 years and only then raise prices and re-coup profits after competitors are driven out.³⁴

Under Article 17(3), the act of “refusing to trade with trading partners” may be considered a violation of the law. We note that there may not be many economic theories suggesting refusal to deal to be welfare-decreasing.³⁵ For example, the US Supreme Court has ruled that a dominant firm can refuse to deal with its rivals by not allowing network access.³⁶ On the other hand, Article 17(4) describes the act of “requiring its counterparty to trade exclusively with it or trade exclusively with the appointed undertakings without legitimate reasons.” This description can be linked to economic theories of exclusive contracts, which offer ambiguous welfare effects.³⁷ Consider the following example: Automobile manufacturers typically have exclusive arrangements with their dealers. Since a dealer can only sell the automobile of one manufacturer, other manufacturers are excluded from this dealer. Selling only one manufacturer’s automobile may allow the dealer to charge higher prices, but the dealer may also offer more services. To a consumer, exclusive dealing results in a trade-off between higher prices and better services. Article 8 of the JI allows defendants that use exclusive dealing to argue that consumers gain more from better services than they lose from higher prices. The defendants can further argue that other manufacturers set up their own exclusive dealers, so competition may not be harmed.

The economics of tying (or bundling) also follows the same line of ambiguity, which Article 17(5) refers to as the act of “tying products or imposing other unreasonable trading conditions during the deals.”³⁸ We often observe how firms tie the sale of multiple products, such as value meals (bundle of food and drink) in restaurants. A justifiable cause for why firms would use such acts is that they are trying to charge different prices to different people. Some people prefer to buy a bundle of goods from one seller, while others may not. On the other hand, the seller may use bundling or tying as a way to exclude competitors.³⁹ In particular, there must be enough consumers who want the bundle, which is only available from the monopolist. Even so, the monopolist may find exclusionary bundling or tying to be profitable only in certain situations.⁴⁰

The last act, described in Article 17(6), refers to “applying differentiated treatment in

regards to transaction conditions such as trading prices to equivalent trading partners.” There are at least three possible economic interpretations of such an act. One interpretation is price discrimination. Economic research generally finds that price discrimination yields ambiguous welfare effects. Another interpretation is that the act raises rivals’ costs or reduces rivals’ revenues. There are several economics models that offer conditions under which raising rivals costs’ or reducing rivals’ revenues may result in harming competition.⁴¹ A third interpretation relates to more recent economic theories on loyalty discounts; it suggests that firms may use certain forms of discounting to harm rivals and competition.⁴² Firms may offer discounts if customers buy all their products from them.⁴³ On one hand, firms benefit from customer loyalty, while customers benefit from lowered price for loyalty. Loyalty discounts seem pro-competitive from this view. On the other hand, the discounts may be set in a way so that competitors, especially new ones, cannot compete for the customers.⁴⁴ The discounts now seem to be anti-competitive.

IF A COMPANY CANNOT SHOW THAT ITS INTENDED PURPOSE OF THE ALLEGED ACT IS PART OF ITS USUAL BUSINESS PRACTICES, THEN SUCH AN ACT MAY BE DEEMED ANTI-COMPETITIVE.

4. Justifiable Causes

Article 17 of the AML highlights how some of the described practices are “without any justifiable causes.”⁴⁵ Economic reasoning is applied here: If a company cannot show that its intended purpose of the alleged act is part of its usual business practices, then such an act may be deemed anti-competitive. For example, a retailer often sells many products but may advertise a few of them (“loss leaders”) at prices below costs. While one can argue that the act is a violation of Article 17, a justifiable cause for the retailer to use the act is that it is intended to induce customers to visit its stores and buy other products.⁴⁶ Going back to transaction costs, another example comes from using exclusives so that firms do not need to constantly renegotiate contracts. Exclusives also allow firms to manage risks in their supply chains.⁴⁷

A general justifiable cause for alleged abusive acts is that they may help eliminate negative externalities, such as dis-incentives to reward investments or innovation, free-riding on marketing expenses, excessive entry, costly monitoring, costly divestiture, and costly expansion to provide access, loss of reputation in association with inferior downstream firms, sunk costs, and so on.

5. Elimination or Restriction of Competition

Now, suppose that the plaintiff were able to prove that there had been an abuse of dominant market position without any justifiable causes. Would this mean that the plaintiff had won? Alternatively, suppose that the defendant did have a justifiable for its act. Would this mean that the defendant had won? Article 6 of the AML suggests otherwise:

“Undertakings with dominant market positions shall not abuse their dominant market positions to eliminate or restrict competition.”

Following the monopolistic provisions of the AML, competition must be eliminated or restricted. Wu (2008) explains this additional reasoning, in that Article 6 was not included in

the initial draft of the AML.⁴⁸ Instead, the article was added in the subsequent drafts because the reviewers of the initial draft felt that the AML should explicitly differentiate between cases when dominant market positions have been achieved legally and illegally. Specifically, the reviewers observed that other countries do not ban firms from gaining dominant positions due to the following economic principle: Relatively efficient firms should have more of a market, at the expense of inefficient firms. Banning these efficient firms and protecting inefficient firms can only harm consumers and social welfare.

As with vertical agreements, the JI does not mention the elimination or restriction of competition as a factor in the abuse of dominance analysis, so we do not have guidance on whether there is a need to demonstrate this element. However, the decision from *Rainbow v. Johnson & Johnson* does suggest that the plaintiff has to do so.

The concern in these discussions seems to come from how competition may be eliminated or restricted, even when the defendant has a justifiable cause. A defendant's act may lower its costs or enhance demands, but at the same time, drive out competitors and result in making consumers and society worse off. But we have to be careful here: A lack of a justifiable cause does not necessarily imply harm to competition. Consider a situation in which the defendant's act has eliminated competitors, but there are no barriers to entry. New competitors will simply replace the eliminated competitors, and competition will not be harmed. While a justifiable cause may be an important factor in considering how competition may have been harmed, there

WHILE A JUSTIFIABLE CAUSE MAY BE AN IMPORTANT FACTOR IN CONSIDERING HOW COMPETITION MAY HAVE BEEN HARMED, THERE MAY ALSO BE OTHER FACTORS, SUCH AS BARRIERS TO ENTRY, WHICH SHOULD BE CONSIDERED.

may also be other factors, such as barriers to entry, which should be considered.

The key issue here is really the way that competition may be harmed, regardless of whether or not there is any intention of harming competition. That is, there is an underlying trade-off between any benefit the defendant might see from its action and any harm

consumers might experience. In a complete information world, economists have methodologies that allow for simulating what would happen with or without the defendant's practice. For example, a model can be created based on observing how competitors are differentiated in the case that the defendant will be using loyalty discounts. Afterwards, demands can be estimated and prices can be calculated for cases with and without the use of loyalty discounts. Differences in price, consumer surplus, and welfare can then be calculated in order to illustrate the use of loyalty discounts.

In reality, informational requirements may make these methodologies impractical. Plaintiffs may not have the resources to fulfill their informational needs, and instead, they rely on making assumptions. There may be no historical information on how firms have competed in the past. Sometimes, the assumptions made may be too strong. In such cases, they may not be realistic, given the available facts. Assuming that there has been perfect competition in the past in a high fixed cost market may not be suitable. For example, perfect competition is unlikely to have occurred in most telecommunication markets, since government policies have limited entry in order to encourage market development. A further consideration is that, even if there is enough information to make all the necessary calculations reliable, there is still the issue of determining what the welfare standard should be. As an alternative to using such

methodologies, there are tests that rely on available information, such the “profit sacrifice” test, the “no economic sense” test, and the “equally efficient competitor” test.⁴⁹ However, these tests may reflect different welfare standards, and they also have different rates of false convictions or false acquittals.⁵⁰

C. Possible Roles for Economists

Article 12 of the JI states that the parties may use specialists (including economic experts), while Article 13 of the JI states that the courts may use an (economic) expert agreed upon by the parties, or appoint one if there is no agreement. Given that economists do have a role in this legal process, we turn our attention to offering more details on this role.

As we have discussed earlier, economics can offer support in terms of evidence from theoretical and empirical analyses, such as defining relevant product markets, testing the conditions identified by the theory, and quantifying damages. The role of economists is then to be the providers of these analyses. Moreover, economists can point to what factors or data are needed at the start of litigation.⁵¹ With the knowledge of how to apply these analyses, economists are more able to understand the trade off between information requirements and precision. Gathering information may be costly, but then, the information may help in winning a case.

ARTICLE 12 OF THE JI STATES THAT THE PARTIES MAY USE SPECIALISTS (INCLUDING ECONOMIC EXPERTS), WHILE ARTICLE 13 OF THE JI STATES THAT THE COURTS MAY USE AN (ECONOMIC) EXPERT AGREED UPON BY THE PARTIES, OR APPOINT ONE IF THERE IS NO AGREEMENT.

We also want to mention the information required for applying economic analyses. Public websites and government studies may provide qualitative information about markets and their structures. Statistical agencies and private consulting firms may have the required pricing and cost information. Estimates of demand sensitivity for certain products (i.e., price elasticity) may already be available in the economic literature. Plaintiffs or defendants may have marketing studies, possibly with market share estimates; financial documents detailing their profit structure (i.e., revenues, costs, etc.); and transaction data on prices and quantity sold to their customers. Besides knowing how much the customers bought and at what prices, plaintiffs or defendants may be able to indicate the customers’ willingness to pay and their price sensitivity.

Economists can also provide help both on how economic issues can be presented, and on how to cross-examine the opposing economists. An economics expert report should include not only analytical results and conclusions, but also methodologies and assumptions, including justifications for the chosen methodologies and assumptions. The report should also explain how robust the results are. All data (raw and constructed) and computer programs needed to replicate the results should be made available upon request. In sum, the report should allow other economists and non-economists to understand how the conclusions are reached.

A key concern of using experts, including economists, is that the incentives to testify truthfully can be murky.⁵² Both plaintiffs and defendants may have similar incentives in

retaining economic experts as “hired guns,” in that the sole purpose of their employment is to support their employers’ views. For example, an economist may offer views without any analytical support, analytical support without any facts, or non-standard analytical support. We have to assume that the courts are relatively astute to disqualify such an economist. In the US decision, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, expert testimony was deemed to be admissible only if it is “sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.”⁵³ Background checks may help to ease the courts’ collective burden of assessing economic experts. Posner (1999) points to how publication records can help to keep economic experts from acting as hired guns, because true experts are unlikely to refute their own publications. A relative lack of publications, on the other hand, may instead permit experts to act as hired guns.

Given the different types of applicable economic analyses, the legal team may consider retaining an economics team that can offer theoretical, empirical, and presentation skills in one package. Requests for proposals may help legal practitioners to both determine an economics team’s expertise and estimate the likely budget. The proposal should include key objectives (e.g., theory of the case), methodologies, relevant literature, and timelines, and it should also explain the resource requirements, such as labor and materials. Once retained, legal practitioners should prepare questions for economists in order to communicate efficiently. Consider asking the following questions, for example: What is the economic model used to assess the alleged anti-competitive acts? Under what conditions does the model predict harm to competition? How can the harm and damages be estimated? What are the key assumptions and observations to support the theory and empirical analyses? What are the possible justifiable causes for the alleged acts?

III. CURRENT STATE OF ECONOMIC EVIDENCE USED IN CHINA

As far as we are aware, there have been three private action cases taken under the private provisions of the AML that have reached the appeals courts. All three involved abuse of dominant market position; none depended on monopolistic agreements. The plaintiffs lost in all these cases in the lower courts, with the decisions being upheld in the appeals courts. To discuss the economic evidence used in Chinese cases so far, we turn to the deliberations made in the lower courts for these three cases, and then we offer our views on what alternative evidence could have been presented.

A. Renren v. Baidu

The plaintiff, Tangshan Renren Information Service Co., Ltd. (Renren), is a content provider that offered medical information on its websites, while the defendant, Beijing Baidu Network Technology Co. Ltd. (Baidu), is a Chinese Internet search provider.⁵⁴ Baidu provided search engines for users to freely search for any topic using the Chinese language. The findings of any search would be composed of links to websites related to the topics being searched. Baidu earned income by charging websites for better rankings in these searches.⁵⁵ Essentially, Baidu sold keywords that might be used by users on searches through an auction;⁵⁶ the winner of the auction would get a better ranking in searches.⁵⁷ Since more than one word could be used in searches, buying more than one word could help to increase the likelihood of getting an even better, higher ranking. The plaintiff made the following allegations in its private suit at the

intermediate court: It initially made lump sum payments to the defendant in order to promote its websites.⁵⁸ Afterward, the plaintiff had to spend relatively less due to its business needs. Subsequently, the plaintiff found the listings for one of its websites dramatically reduced.⁵⁹ The plaintiff claimed that the defendant was dominant in the search engine market in China under Article 19 of the AML and maintained that the defendant was abusing its dominance by blocking the plaintiff's website, causing the plaintiff financial harm.⁶⁰ While the plaintiff did not explain how it was hurt financially by the reduction of listings, the plaintiff was likely selling advertising placed on its websites. The defendant's act likely had reduced the number of visitors to the plaintiff's websites, which would have made the websites relatively less attractive to advertisers. The plaintiff sued the defendant under Article 17(4) of the AML, which prohibits any undertaking "requiring its counterparty to trade exclusively with it or trade exclusively with the appointed undertakings without legitimate reasons."⁶¹ The plaintiff wanted the defendant to stop the practice, and also to provide monetary compensation.

In terms of market definition, the plaintiff suggested a relevant market consisting of the "search engine services market in China," but did not offer much supporting evidence. The defendant countered that search engine services were not a relevant product market, since users could use its search engine services for free.⁶² In its decision, the intermediate court rejected the defendant's argument by recognizing that the defendant was able to earn profits from ranking websites despite providing its search services for free.⁶³ The court also recognized a "search engine services market" as the relevant product market by using qualitative factors in terms of product characteristics and use. In contrast to other Internet services, such as news or email, the court reasoned that search services enabled the users to receive relatively vast amounts of information quickly through their searches. Cultural and language factors were considered to determine China as the relevant geographic market.

To establish dominance, the plaintiff had argued that the defendant had more than 50% of the "search engine service market in China" by offering two public documents indicating the defendant's market share in order to presume dominant market position.⁶⁴ The court rejected the plaintiff's evidence, since the documents provided by the plaintiff did not explain the nature of the market or the basis on which the market share had been calculated. On the whole, the court seemed to differentiate between relevant markets for antitrust evaluation and "common sense" markets in business practices, as well as to understand the need for relating market share to the relevant markets.

As for whether the defendant might have abused its dominant position, the plaintiff claimed that the defendant reduced the listing of the plaintiff's websites because the plaintiff had started paying less to the defendant. The court pointed out that, since the rating system was based on relevancy and payments, the plaintiff did not provide sufficient information on the causality relationship between the listing reduction and payment reduction. If the plaintiff's websites were truly relevant to searches, they should not have suffered any reduction in listings. Moreover, the defendant offered a justifiable cause for its act: It admitted to discriminating against the plaintiff in order to prevent fraud. The court understood that the defendant's business relied on ranking websites based on relevancy to

ON THE WHOLE, THE COURT SEEMED TO DIFFERENTIATE BETWEEN RELEVANT MARKETS FOR ANTITRUST EVALUATION AND "COMMON SENSE" MARKETS IN BUSINESS PRACTICES, AS WELL AS TO UNDERSTAND THE NEED FOR RELATING MARKET SHARE TO THE RELEVANT MARKETS.

the topics being searched, but some websites with irrelevant content may have added unrelated links in order to gain relatively higher search rankings. The defendant, like other Internet search providers, had the necessary technology to treat such websites as frauds in order to reduce their rankings or even eliminate them from being listed.⁶⁵ The court seems to have accepted this pro-competitive argument from the defendant. Preventing fraud may be deemed as reasonable, despite the possible harm to a private entity.

Given the lack of supporting evidence on the defendant's dominance provided by the plaintiff, what could the plaintiff have offered as an alternative? A complication in this case is that the search engine market may be considered as a two-sided market (search and advertising).⁶⁶ The court did recognize the nature of a two-sided market by pointing out that the defendant earned profits from other related services.⁶⁷ So, the relevant product market could be a general "search engine" market that included both sides, with a "search" market on one side and an "advertising" market on the other side. The "search" market could arguably be supported by the lack of alternatives to searching for information on the Internet. The "advertising" market could consist of advertising services provided via keyword searches on the Internet. Again, if someone had wanted to advertise based on keywords, there were no reasonable alternatives. However, other forms of Internet advertising, such as placement of advertising through banners, may have been included in the "advertising" market.⁶⁸ The Chinese language could have been used as a way to narrow the relevant markets, or as a way to define the relevant geographic market by observing that there were no alternatives in terms of Chinese-language search and advertising.

In market definition with two-sided markets, an advantage of using functionality instead of pricing data could be that there is no need for complicated accounting of how each side may be affected by the other side. Focusing only on one side's prices may not lead to the right market definition, since the prices may be influenced by pricing on the other side. For example, zero pricing on one side may be driving up the demand on the other side, which then affects the pricing on the first side.

Market share data could certainly provide guidance for evaluating dominance. For the "search" market, market share information on search engine websites seems readily available. The plaintiff had already provided support of the defendant's dominance through public documents, but it could have better explained how the figures were calculated. For the "advertising" market, public information may not be readily available, but profit margins could have been used to indicate market power, which then may have supported dominance. Since the defendant is a publicly listed company, its financials may be available publicly and could have revealed the defendant's profit margins.⁶⁹ By supporting how the defendant may be dominant in both sides of the market, the plaintiff could avoid any critique about how the market shares might be misleading in terms of dominance. That is, the defendant might be dominant on one side of the market but not necessarily on other side. Moreover, the plaintiff could suggest that the defendant was dominant regardless of whether the relevant market was defined as including both sides, such as in a general "search engine" market, or as including only one side, such as a "search" market or an "advertising" market.

A more important issue here is the relationship between the relevant market and the abusive act. In particular, the plaintiff and the defendant must have been in, or have potentially been in, the same market. The plaintiff was not in the "search" market, but it could have been competing with the defendant in the "advertising" market. If the "advertising" market were

defined narrowly to only include keyword advertising, then the plaintiff could not be in the same market as the defendant. On the other hand, if the “advertising” market were defined to include both keyword advertising and placement advertising, then the plaintiff and the defendant would be competitors or potential competitors in the same relevant market.⁷⁰ How narrowly the market was defined could matter in that, if the plaintiff and defendant were neither competitors nor potential competitors, economic theories on non-collusive anti-competitive behaviour would suggest that the defendant could not earn any extra profit from harming the plaintiff. Therefore, the defendant could not have harmed the plaintiff. But if the plaintiff could not be harmed, then competition could not be harmed, either.

To further relate market definition and harm to competition, consider the market for watches in that consumers have different demands for luxury watches and regular watches. If we assume that the demands for each type are so differentiated to the extent that they are independent, then we can clearly defined different relevant markets for each type. With this market definition, lower competition at one market will not result in lower competition at the other market since consumers facing higher prices in one market will not buy in the other markets. That is, a price increase for a \$10,000 watch is unlikely to increase demand for a \$10 watch. So, firms in one market have no incentive to harm firms in the other market since there is no profit in doing so (unless are planning to enter the other market or somehow, collude to increase prices in either or both markets).

If the plaintiff could prove that the defendant had dominance and both firms were in the same relevant market, what could the defendant’s abusive act be? Under Article 17(4) of the AML, the plaintiff had claimed that the defendant was practicing an act of “requiring its counterparty to trade exclusively with it or trade exclusively with the appointed undertakings without legitimate reasons.” As we have discussed earlier, this definition may be a better fit with exclusive dealing theories, but the plaintiff was not an exclusive dealer of the defendant. An alternative for the plaintiff was to have claimed an act of “refusing to trade with trading partners” under Article 17(3) of the AML. However, we have already discussed how economics may not provide much guidance on a refusal act, since theories tend to suggest that the act does not necessarily affect welfare adversely. Perhaps, a better avenue for the plaintiff would have been to claim an act of “applying differentiated treatment in regards to transaction conditions such as trading prices to equivalent trading partners” under Article 17(6) of the AML. We have suggested that this act may be interpreted as a way to raise rivals’ cost, which may lead to exclusion. In this case, the plaintiff was likely earning income from placing advertisements on its website, while the defendant’s profit comes from advertisement through searches. For the plaintiff to claim that the defendant’s act was exclusionary, the plaintiff must argue an “advertising” market that includes both keyword advertising and placement advertising. With this relevant product market definition, the plaintiff would have to show that the defendant was dominant. Given the defendant’s dominance, the plaintiff could then have an explanation for how the defendant’s act could be abusive.

A bigger challenge for the plaintiff in winning the case was the defendant’s justifiable cause. Clearly, the plaintiff could show that it had been harmed by the defendant’s action. However, what was the cause behind the defendant’s action? According to the defendant, it had identified that the plaintiff was exploiting the defendant’s search engines to identify the plaintiff’s websites, even through the websites may have contained information irrelevant to

searches made through the defendant's search engines. The defendant's business relied on users of its search engine finding websites with relevant information to their searches. Of course, users would likely stop using the defendant's search engines if their searches were finding irrelevant information. Since the exploitation could have harmed the defendant's business, the defendant admitted to taking steps in order to protect its business. Somehow, the plaintiff needed to have been able to rebut this argument and argue that the defendant's action was to exclude competitors from an expanded "advertising" relevant market.

Lastly, if the plaintiff could successfully invalidate the defendant's cause, it would still need to show harm to competition. But to show how competition had been harmed, the plaintiff would need to use the defendant's documents or data. For example, internal documents from the defendant may have indicated that the plaintiff was disciplining the defendant's ability to raise prices in the relevant market, and that, if the defendant could eliminate the plaintiff from the relevant market, the defendant could raise prices afterward. A more complicated alternative for the plaintiff may be to use empirical analyses for simulating effects of the defendant's act.⁷¹ However, data for such empirics may often need to come from the defendant. A typical challenge for plaintiffs in proving harm to competition is that they do not have access to the defendant's information.⁷²

B. Li Fangping v. China Netcom

The plaintiff, Li Fangping, was a consumer of fixed-line telephony services while the defendant, China Netcom Co. Ltd. Beijing Branch (China Netcom), offered fixed-line services.⁷³ The defendant allowed citizens or registered permanent residents of Beijing the options of having to pay before receiving their services (pre-paid plan) or after receiving their services (post-paid plan). However, non-registered residents could only have the pre-paid plan unless they could offer a guarantee, such as owning a house.⁷⁴ The plaintiff was a non-registered resident of Beijing who wanted to buy the defendant's services under the pre-paid plan, but could not do so. So, the plaintiff sued the defendant at the intermediate court under Article 17(6) of the AML by alleging that the defendant was abusing its dominance in treating customers differently.⁷⁵

In terms of evidence, the plaintiff simply argued that the defendant had dominance based on the defendant's ranking from a website, as well as on an article about how successful the defendant was in Beijing. In its decision, the court affirmed that the plaintiff bears the burden of proof for showing dominance. The court rejected the plaintiff's evidence of dominance, since it was not clear how dominance could be established without first defining a relevant market. The plaintiff's evidence, the website and the article, calculated market shares using markets that may not necessarily be the relevant markets. Furthermore, the plaintiff did not explain what the relevant markets should be.

THE COURT REJECTED THE PLAINTIFF'S EVIDENCE OF DOMINANCE, SINCE IT WAS NOT CLEAR HOW DOMINANCE COULD BE ESTABLISHED WITHOUT FIRST DEFINING A RELEVANT MARKET.

As for the plaintiff's claim to an abusive practice under Article 17(6), the plaintiff offered the observation of the defendant using plan discrimination—a form of price discrimination. The defendant admitted to the plaintiff's claim of discrimination, but explained that it had to apply different payment types to address the differentiated risks in collecting payments from its

customers. With these arguments, the court decided in favor of the defendant.

As an alternative, what could the plaintiff have done to further support his claim of the defendant's dominance? First, the relevant market could have been defined as the market for pre-paid fixed-line services using qualitative factors, such as how the product was purchased by consumers. The defendant had already admitted that customers who pre-paid their services were likely to be different from those who post-paid their services. Using the defendant's admission, the plaintiff could have claimed that demands for pre-paid plans are different from demands for post-paid plans, and as such, there could be two different relevant markets: one for pre-paid plans and another for post-paid plans. The plaintiff could then have an explanation for the court on what the relevant markets should be.

In order to show that the defendant had a dominant market position in the market for pre-paid plans, the plaintiff could have used market power as support, since market share data were not available. The defendant's financial reports were available publicly, and they could have shown the profitability of pre-paid fixed-line services. As we have already discussed in the previous case, the plaintiff could argue that the defendant's profit levels were indicative of the defendant's market power and dominance. To defend itself, the defendant could have countered that its profit level was due to relatively lower costs. But then, the plaintiff could also have argued that the defendant's ability to discriminate was another indicator of market power and dominance.⁷⁶

Now, suppose that the plaintiff could have been able to successfully argue that the defendant's cause was not justifiable. For example, the defendant could have collected from non-paying and non-registered residents with ease. How could the defendant's act be considered abusive according to Article 17(6)? The plaintiff had argued the defendant's act was price discrimination. Our earlier discussion suggests that price discrimination may make some consumers worse off and other consumers better off, but that it tends to increase total welfare. In this case, the defendant's act may harm some customers by limiting their payment choices. On the other hand, these consumers may not be harmed if they are able to purchase their services from the defendant's competitors at nearly the same cost.

Keeping in mind a case in which the plaintiff would not be a customer, but a competitor, we have suggested that there may be other interpretations of Article 17(6), such as raising rivals' costs, reducing rivals' revenues, or using loyalty discounts to harm competitors. If rivals' costs are not raised, rivals' revenues are not reduced, or loyalty discounts do not harm competitors, then economic theories would suggest that there is no harm to competition. That is, these theories are suggesting that harm to competition is conditional on harm to competitors. To interpret Article 17(6) according to these acts, the plaintiff would need to show harm to competitors. As a customer, the plaintiff may have difficulty in finding support of competitors being harmed; this may be challenging, as firms typically do not publicize their business details. Moreover, if other competitors were really harmed, they would likely either have taken actions themselves or have alerted the antitrust authorities. Of course, the defendant's practice could have been common among its competitors, in that most firms generally will have some credit requirements in place to avert losses due to non-payments by their customers.⁷⁷

C. Huzhou Yiting Termite v. Huzhou City Termite

The plaintiff, Huzhou Yiting Termite Control Services Co., Ltd., wanted to provide termite prevention services in Huzhou at a time when the defendant, Huzhou City Termite Control Research Institute Co., Ltd., was the only termite prevention service provider in Huzhou.⁷⁸ To provide termite prevention services, the plaintiff had applied to register with a local authority, the Planning and Construction Bureau of Huzhou.⁷⁹ However, the local authority rejected the plaintiff's application. Apparently, the local authority used to own the defendant and still had some involvement in the defendant's business. The plaintiff then took an administrative challenge against the local authority and won the administrative challenge. Afterwards, the plaintiff sued the defendant for abusing its dominant position under the AML in the intermediate court, seeking monetary compensation for damages. However, the plaintiff did not make clear how the defendant had abused its dominance. The court decided in favor of the defendant.⁸⁰

As evidence, the plaintiff essentially offered the observation that the defendant was the only firm supplying the service in question within a city. Implicitly, the plaintiff was suggesting that the relevant market was "termite prevention services in Huzhou." The court accepted the relevant market based on the plaintiff's observation. Furthermore, the court ruled that the plaintiff met the threshold for dominance, since the defendant had 100% of the relevant market. While the local authority was not a defendant, the court viewed that the local authority had legitimate reasons for rejecting the plaintiff's application. The court then ruled that there was not enough support to show that the defendant had used an abusive act, or that competition had been eliminated or restricted.

IN REVIEWING THE THREE CASES, AN IMMEDIATE IMPRESSION IS THAT THE PLAINTIFFS DID NOT RELY MUCH ON USING ECONOMICS...ON THE OTHER HAND, THE COURTS SEEM VERY CAPABLE IN UNDERSTANDING AND DEFINING RELEVANT MARKETS.

A key observation is that, in theory, observing a single firm in a market may not necessarily imply a relevant market. Potential competitors and a lack of barriers may prevent a single firm from behaving as a monopolist. For example, if the defendant had charged monopoly prices, competitors may have entered the Huzhou market. These entries could come from other termite prevention service providers in nearby cities, firms who could easily gain the expertise

to control termites, or individuals who may decide to do control termites themselves. If there were these potential competitors, the hypothetical monopolist test would suggest a relatively broader relevant market than only the city of Huzhou.

Given that the court had accepted the defendant's dominance, what might the defendant's abusive act have been? Since the defendant shared economic interests with the local authority, the plaintiff was inferring that the defendant and the local authority were a single entity. With this inference, the plaintiff could have claimed an abusive act of "restricting trading partners to only trade with the undertaking or undertakings designated by the undertaking" under Article 17(3) of the AML, or of "applying differentiated treatment in regards to transaction conditions such as trading prices to equivalent trading partners" under Article 17(6) of the AML. As we have discussed already, these descriptions may fit as refusal to deal or as raising rivals' cost

in terms of economic description of anti-competitive acts. As well, economic theories tend to suggest that refusal to deal may not lead to adverse welfare effects, while raising rivals' cost may do so. Without any justifiable causes for the action by the defendant and the local authority, the plaintiff could have argued by applying a basic economic theory: Any entry into a monopoly would generally result in lower prices. By denying the plaintiff's entry, the plaintiff would have harmed competition by preventing prices from being lowered. If the plaintiff needs to quantify the harm, such as how much prices could have fallen, then it would face a more challenging aspect in using empirical analyses without data being readily available. Similarly, if the defendant could have successfully expanded the relevant markets, the plaintiff would have to use empirical analyses for showing harm to competition in that case, unless it had access to documentary evidence.

A more practical alternative for the plaintiff could have been to sue the local authority under Article 51 of the AML. This article prevents authorities from abusing their administrative powers from eliminating or restricting competition. However, the article would not have allowed the plaintiff to claim compensation from damages.

D. Possible Lessons

In reviewing the three cases, an immediate impression is that the plaintiffs did not rely much on using economics. Since market share is readily observable and easily understood, the plaintiffs likely chose to support their claims through this avenue. But then, the plaintiffs in the first two cases lost mostly because they did not provide enough explanations and facts for market definition, and consequently, their claim of dominance failed. On the other hand, the courts seem very capable in understanding and defining relevant markets.

Now, even if the plaintiffs were able to prove dominance, there is the evidentiary question: Who has to provide evidentiary support on the abuse of dominant market position, as well as on any justifiable causes? Since the plaintiffs offer no explanation as to why the defendants' acts may be abusive, nor any support on how competition may have been harmed, the court really could not provide any indication on their ability to assess such explanations. On the other hand, the defendants were able to explain business justifications for their actions, and the courts also were able to understand the defendants' explanations.

With respect to abuse of dominant market positions, the JI seems to follow these court decisions: The plaintiff has to provide support on the abuse, while the defendant has to support any justifiable causes. As discussed earlier, economic reasoning can help to provide support on whether an act is abusive or not, as well as on the justification of any causes behind the act. The JI and the decisions may have assigned the burden of proof in this manner due to who may have the relevant information: The plaintiff must explain why it has been harmed, while the defendant must have a reason for its act. What remain unclear are the evidentiary thresholds: to what extent may an act be abusive or may a cause be justifiable? For example, would narrations suffice, or is there more evidence required? Further clarity can only come from future cases.⁸¹

IV. CONCLUDING REMARKS

Our discussion expands on how the rule of reason is behind the private provisions of the AML, as

well as on how economics can be applied when using this approach. In litigating cases involving these provisions, antitrust economics can offer possible explanations and point to evidentiary indicators. The explanations are usually directed toward explaining the ability of firms to raise prices, explaining how agreements and acts affect consumers or society, and eventually, explaining how competition is eliminated or restricted. Market power can be indicated from the usual properly measured market shares, but also indirectly from market structure, such as intensity of competition and potential entry. Whether or not the agreements and acts in question harm consumers and society may depend on conditions that allow defendants to profit from using them. Observations of these conditions can be used as evidentiary indicators of harm. In addition, economics can help to measure any harm and associated damages.

After explaining the role of economics in litigating cases under the civil provisions of the AML, we turned to decisions made by the appeals courts for more guidance on this role. We observed that two of the cases failed for the plaintiff because the relevant markets were not properly defined. We explained how antitrust methodologies based on economics can be used to define relevant markets. An additional challenge with these cases is the lack of data to properly measure market shares. We pointed to how indicators of market power may be used as evidentiary support of dominant market position. We recognized that defendants do seem apt to justify their conduct through business reasons.

As the Chinese economy continues to develop, we expect that civil antitrust litigation will also grow. The court decisions will help us in developing further understanding the AML and its enforcement. Economic analyses in supporting the litigation will also improve, which in turn, will improve the enforcement of the law in China. ◀

1. Dennis Lu, Competition Bureau (dennis.lu@cb-bc.gc.ca), and Guofu Tan, University of Southern California and Shanghai University of Finance and Economics (guofutan@usc.edu). This paper is based on the two presentations given by the second author in the Antitrust Private Litigation Forum, Beijing, April 17–18, 2012. The authors thank Myles Clarke, Adrian Emch, Bill Erlich, David Stallibrass, Michael Williams, and the participants of the forum for helpful questions and comments. The views expressed herein are entirely those of the authors and are not purported to reflect those of the Competition Bureau.

2. China had 33 civil cases accepted nationwide in 2010, with plaintiffs requesting as much as RMB 200 million in compensation, as observed by Li Zhu, *New Developments in Civil Antitrust Litigation in China*, CPI Antitrust Chronicle (January 2012). Our focus is on issues related to private enforcement, but the same issues may also be related to enforcement by Chinese authorities, which is discussed by Adrian Emch, *Antitrust in China – The Brighter Spots*, 3 *European Competition Law Review*, 132–138 (2011) and Adrian Emch, *Abuse of Dominance in China – The First Cases*, Capacity Building for the Enforcement of Competition Law (Wang Xiaoye, Ed.), 153–173 (2012).

3. *Supreme People’s Court of the People’s Republic of China, Provisions on Various Issues for Application of Law in Adjudication of Civil Lawsuits Caused by Monopoly Conduct*, Judicial Interpretation (2012) No. 5. This interpretation passed at the Conference (No. 1539) of the Adjudicatory Committee of the Supreme People’s Court on January 30, 2012.

4. While we refer generally to economics throughout this paper, we want to note how specialized

economics is in the context of antitrust. In particular, antitrust is commonly studied in the field of industrial organization. With the application of non-cooperative game theory, industrial organization as a field has evolved to study strategic interactions among firms.

5. An expert's testimony was excluded in a US case because the witness lacked specialized training and experience in industrial organization. Despite the testimony in question having come from someone with a doctoral degree in economics, the decision in *Nelson v. Monroe Regional Medical Center*, 925 F.2d 1555 (7th Cir. 1991) suggests that testimonies given by witnesses with "no background in antitrust markets" may be excluded. For more details, see Gregory J. Werden, *The Admissibility of Expert Economic Testimony in Antitrust Cases*, 33 ABA Section of Antitrust Law, Issues in Competition Law and Policy, 801–817 (2008).

6. In contrast, a *per se* approach presumes the effects of the alleged act. Phillip Areeda offers the following definitions for rule of reason and *per se* approaches: "An act that is unlawful whenever it occurs and regardless of the circumstances may be said to be 'unlawful *per se*.' By contrast, where legality depends upon an appraisal of the circumstances of a challenged act, the case is said to be governed by the 'rule of reason.'" For more details, see Phillip Areeda, *The 'Rule of Reason' in Antitrust Analysis: General Issues*, Federal Judicial Center's Division of Continuing Education and Training (1981).

7. Richard Posner explains that the testifying expert should serve to offer evidence to the court, not to provide advice or to consult. For example, rather than testifying that price fixing is illegal, an economic expert for a defendant firm might testify that, if there are no price effects from an alleged agreement, then price fixing behavior likely did not occur or be consistent with the agreement. See Richard A. Posner, *The Law and Economics of the Economic Expert Witness*, 13(2) Journal of Economic Perspectives, 91–99 (1999).

8. From the perspective of optimal mechanism design, it is not clear whether the AML is optimal in terms of enforcement, such as leading to either more false convictions (Type I error), false acquittals (Type II errors), or somewhere in between. For discussion of designing legal mechanisms for antitrust enforcement from a judicial review perspective, see Christian Ahlborn, David S. Evans, and A. Jorge Padilla, *Unilateral Practices, Antitrust Rules, and Judicial Review*, mimeo, (2008).

9. Some of the trade offs might not be easily quantifiable. For example, given the limited amount of information available, the trade-off between price and service quality may not be easily determined. This challenging determination is really for the judges to decide.

10. The European Commission's 2010 *Guidelines on Vertical Restraints* defines vertical agreement as "an agreement or concerted practice entered into between two or more undertakings each of which operates, for the purposes of the agreement or the concerted practice, at a different level of the production or distribution chain, and relating to the conditions under which the parties may purchase, sell or resell certain goods or services" (European Commission, p. 6).

11. For a detailed discussion on the economic incentives for collusion, as well as the economic methodologies for detecting collusion, see Louis Kaplow, *An Economic Approach to Price Fixing*, 77(2) Antitrust Law Journal, 343–449 (2011).

12. For more details, see *Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.*, 441 US 1 (1979) and Stephen Calkins, *Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.*, Antitrust Stories, Eleanor M. Fox and Daniel A. Crane (eds.), Foundation Press (2008).

13. The defendant also sued for tied selling, refusal to deal, and the improper use of copyrighted materials.
14. For example, see Gregory J. Werden, *Economic Evidence on the Existence of Collusion: Reconciling Antitrust Law with Oligopoly Theory*, 71 *Antitrust Law Journal*, 719–800 (2004) and William E. Kovacic, Robert C. Marshall, Leslie M. Marx, and Halbert L. White, *Plus Factors and Agreement in Antitrust Law*, *University of Michigan Law Review*, forthcoming (2011).
15. Robert E. Hall and Victoria A. Lazear state that “In most cases, the analysis considers the difference between the plaintiff’s economic position if the harmful event had not occurred and the plaintiff’s actual economic position. The damages study restates the plaintiff’s position ‘but for’ the harmful event; this part is often called the ‘but for’ analysis. Damages are the difference between the ‘but for’ value and the actual value.” See Robert E. Hall and Victoria A. Lazear, *Reference Guide on Estimation of Economic Losses in Damages Awards, Reference Manual on Scientific Evidence*, Second Edition, Federal Judicial Center, 284 of 277–332 (2000).
16. For example, see Yongmin Chen, *Oligopoly Price Discrimination and Resale Price Maintenance*, 30(3) *Rand Journal of Economics*, 441–455 (1999). The paper provides a model to explain why manufacturers may want to profitably use maximum or minimum RPM when there is retail market price discrimination. His analysis predicts ambiguous welfare effects with the use of RPM. For the economics behind maximum RPM in distribution agreements, see Benjamin Klein, *Distribution Restrictions Operate by Creating Dealer Profits: Explaining the Use of Maximum Resale Price Maintenance in State Oil v. Khan*, 7 *Supreme Court Economic Review*, 1–58 (1999).
17. For more details, see *State Oil Co. v. Khan*, 522 US 3, 7 (1997).
18. The successive mark-up is often called the “double marginalization problem.” For a discussion on this problem, see Joseph J. Spengler, *Vertical Integration and Antitrust Policy*, 50(4) *Journal of Political Economy*, 347–352 (1950).
19. For more details on the case, see *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 US 877 (2007). This decision completed the reversal of a much earlier US decision banning RPM, *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 US 373 (1911).
20. Besides inducing other dimensions of competition, RPM may be used for exclusionary reasons. For example, see John Asker and Heski Bar-Isaac, *Exclusionary Minimum Resale Price Maintenance*, working paper (2011). The paper explains how upstream firms can profit from using minimum RPM in order to exclude. Downstream firms have an incentive not to accommodate upstream entry, since they can benefit from minimum RPM. If upstream entry is dependent on downstream accommodation, entry is then denied.
21. See Judge Liu’s decision from the Shanghai No. 1 Intermediate People’s Court, *Rainbow Medical Equipment & Supplies Co. v. Johnson & Johnson Medical (China) Ltd. Shanghai Branch*. The plaintiff, Rainbow, had sued the defendant, Johnson & Johnson, for minimum RPM. In particular, the defendant had terminated a distribution agreement after the plaintiff had gained business by quoting prices below the plaintiff’s price floor.
22. A lower court had ruled in favor of the defendants, but it was reversed by the appeals court, which applied a *per se* ruling. For more details, see *Texaco Inc. v. Dagher*, Nos. 04-805, 04-814, 547 US (2006).
23. A “consumer surplus” standard implies that consumers cannot be worse off. This is in contrast to a “total surplus” standard, where society may benefit if all the gains by firms are greater than the losses by

consumers, even if consumers are worse off. The AML's seems to take a "balancing weights" standard, which balances the consumer surplus and firm profits. For a discussion on the AML's approach to welfare, see Pinping Shan, Guofu Tan, Simon Wilkie, and Michael Williams, *China's Anti-Monopoly Law: What is the Welfare Standard?*, 41 *Review of Industrial Organization*, 31–52 (2012). While the rule of reason may have been applied in the US litigation for a relatively long period of time, there has been little guidance from the US Supreme Court on their welfare standard. This is an observation made and discussed in details by Roger D. Blair and D. Daniel Sokol, *The Rule of Reason and the Goals of Antitrust: An Economic Approach*, mimeo, (2012). This paper is available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2039337&download=yes.

24. For detailed discussions on assessing dominance, see the International Competition Network's *Unilateral Conduct Workbook Chapter 3: Assessment of Dominance*, Prepared by The Unilateral Conduct Working Group, Presented at the 10th Annual ICN Conference, The Hague, Netherlands (2011). This document is available at <http://www.internationalcompetitionnetwork.org/uploads/library/doc752.pdf>.

25. For a formal algorithm on delineating relevant markets, see Gregory J. Werden, *Market Delineation Algorithms based on the Hypothetical Monopolist Paradigm*, US Department of Justice, Antitrust Division, EAG Discussion Paper 02-8, (2002).

26. This is the concept behind diversion ratio. For a discussion of diversion ratios, see Carl Shapiro, *Mergers with Differentiated Products*, Speech before the American Bar Association, (November 9, 1995) and Carl Shapiro, *Mergers with Differentiated Products*, *Antitrust*, 23–30 (Spring 1996). Michael Katz and Carl Shapiro extend the use of diversion ratios when applying the critical loss analysis to market definition. This market delineation analysis examines whether the monopolist can profit from the price increase. Diversion ratio helps to estimate how much the monopolist can actually profit from the price increase. See Michael Katz and Carl Shapiro, *Critical Loss: Let's Tell the Whole Story*, *Antitrust Magazine*, 49–56 (Spring 2003).

27. The hypothetical monopolist test was first described in the 1982 US merger guidelines. Subsequent US merger guidelines have made slight revisions to the test's description. For a historical context of market delineation, see Gregory J. Werden, *The History of Antitrust Market Delineation*, 76 *Marquette Law Review*, 123–215 (1992). Most textbooks do not offer clear definitions, something that results in most economics graduates being unfamiliar with the test, as observed by Adriaan ten Kate and Gunnar Niels, *The Relevant Market: A Concept Still in Search of a Definition*, 5(2) *Journal of Competition Law and Economics*, 297–333 (2008).

28. If there is a monopolistic agreement in place, then using current price, which is the monopoly price, would broaden the relevant market. This problem is often called the "cellophane fallacy."

29. For example, see Gregory J. Werden, *Assigning Market Shares*, 70 *Antitrust Law Journal*, 67–104 (2002).

30. For example, newspapers given away for free may have relatively large numbers of readers, but they still often earn less in advertising revenues than traditional newspapers charging for subscriptions.

31. William M. Landes and Richard A. Posner show formal conditions under which market shares do not necessarily imply market power. See William M. Landes and Richard A. Posner, *Market Power in Antitrust Cases*, 94(5) *Harvard Law Review*, 937–996 (1981).

32. Even when a firm has a patent, market power cannot be presumed. The US Supreme Court had ruled that, in a tying case where one of the products is a patented, the plaintiff must still establish the defendant's

market power for the patented product. For more details, see *Illinois Tool Works Inc. v. Independent Ink, Inc.*, 547 US 28 (2006).

33. Sometimes, this act may be referred to as price gouging. In the United States, price gouging laws tend to be at the state level, rather than federal level. A list of how each state applies their price gouging laws, if any, can be found at <http://apps.americanbar.org/antitrust/at-committees/at-fe/pdf/programs/spring-06/price-gouging-statutes.pdf>.

34. For economic theories on predation, see Patrick Bolton, Joseph F. Brodley, and Michael H. Riordan, *Predatory Pricing: Strategic Theory and Legal Policy*, Georgetown Law Journal, 2239–2330 (2000). For more details on predation from an enforcement perspective, see the International Competition Network's *Report on Predatory Pricing*, Prepared by The Unilateral Conduct Working Group, Presented at the 7th Annual ICN Conference, Kyoto (2008). This document is available at <http://www.internationalcompetitionnetwork.org/uploads/library/doc354.pdf>.

35. For a more detailed discussion, see Michael Salinger, *The Legacy of Matsushita*, 38 Loyola University Chicago Law Journal, 475–490 (2007).

36. For more details on refusal to deal from an enforcement perspective, see the International Competition Network's *Report on the Analysis of Refusal to Deal with a Rival Under Unilateral Conduct Laws*, Prepared by The Unilateral Conduct Working Group, Presented at the 9th Annual ICN Conference, Istanbul, Turkey (2010). This document is available at <http://www.internationalcompetitionnetwork.org/uploads/library/doc616.pdf>.

37. For more details, see *Verizon Communications Inc. v. Offices of Curtis v. Trinko, LLP* 540 US 398 (2004). This decision contrasted with an earlier US Supreme Court decision that ruled against the defendant for refusal to deal when there was a termination of a voluntary agreement. For more details, see *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.* 472 US 585 (1985).

38. There is an economics literature on exclusive dealing. For a paper that illustrates that long-term contracts can be a barrier to entry, see Philippe Aghion and Patrick Bolton, *Contracts as a Barrier to Entry*, 77(3) American Economic Review, 388–401 (1987). For a paper that shows how an incumbent might exploit the lack of coordination among multiple buyers to deter entry in the presence economies of scale, see Eric Rasmusen, J. Mark Ramseyer, and John Wiley, Jr., *Naked Exclusion*, 81(5) American Economic Review, 1137–1145 (1991). For more details on predation from an enforcement perspective, see the International Competition Network's *Report on Single Branding/Exclusive Dealing*, prepared by the Unilateral Conduct Working Group, Presented at the 7th Annual ICN Conference, Kyoto (2008). This document is available at <http://www.internationalcompetitionnetwork.org/uploads/library/doc355.pdf>.

39. For a survey of the economic literature on bundling, see Bruce H. Kobayashi, *Does Economics Provide a Reliable Guide to Regulating Commodity Bundling by Firms? A Survey of the Economic Literature*, 1(4) Journal of Competition Law and Economics, 707–746 (2005). For more details on tying and bundling from an enforcement perspective, see the International Competition Network's *Report on Tying and Bundled Discounting*, prepared by the Unilateral Conduct Working Group, Presented at the 8th Annual ICN Conference, Zurich, Switzerland (2009). This document is available at <http://www.internationalcompetitionnetwork.org/uploads/library/doc356.pdf>.

40. In a well-known US antitrust case, Microsoft's practice of bundling its browser software with its operating system software led to a violation of US antitrust law. For more details, see *United States v. Microsoft*

Corp., 253 F.3d 34, 59 (D.C. Cir. 2001).

41. Michael D. Whinston explains that, if buyers cannot coordinate, then a seller can use tying as a way to exclude competitors by preventing them from achieving the necessary economies of scale to operate profitably. See Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80(4) *American Economic Review*, 837–859 (1990).

42. For a historical context of raising rivals' costs, see David T. Scheffman and Richard S. Higgins, *Twenty Years of Raising Rivals' Costs: History, Assessment, and Future*, 12 *George Mason Law Review*, 371–387 (2003).

43. Interests in exclusionary loyalty discounts came from *LePage's Inc v. 3M (Minnesota Mining and Manufacturing Co)* (2003), in which the US Supreme Court declined to review a lower court ruling for the plaintiff in which the defendant was ruled to have been engaged in predatory pricing, even through there was uncontested evidence of above-cost pricing. For more details on loyalty discounts from an enforcement perspective, see the International Competition Network's *Report on the Analysis of Loyalty Discounts and Rebates Under Unilateral Conduct Laws*, prepared by the Unilateral Conduct Working Group, Presented at the 8th Annual ICN Conference, Zurich, Switzerland (2009). This document is available at <http://www.internationalcompetitionnetwork.org/uploads/library/doc357.pdf>.

44. Note how this description of an act may also be treated as bundling or tying. Economics can help to study the effects of the acts by distinctly modeling them. For example, the seller's decision can be formalized as whether to sell its products as a bundle, to offer conditional discounts, or to do both.

45. Consider a customer who requires 100 units. A dominant supplier offers \$10 per unit and a 20% discount for buying all its requirements. So, the customer pays \$1000 but gets \$200 back. For the customer to buy 10 units from a competitor, the customer will lose \$200, or \$20 per unit. So, the competitor must at least pay \$20 per unit to the customer, who is only paying \$10 per unit. To win the business from the customer, the competitor then must not only give the 10 units to the customer, but must also give back a \$200 rebate. Our example can be extended to include a pricing below cost test, as proposed by Janusz Ordover in *Ortho Diagnostic Sys. v. Abbott Labs.*, 920 F. Supp. 455 (S.D.N.Y. 1996). A version of the test is that the price of the contested products less full amount of discount must be below the defendant's incremental cost to produce those product(s) in order to have a violation, as raised in *Cascade Health Solutions v. PeaceHealth* (2007). For additional details, see Patrick Greenlee, David Reitman, and David Sibley, *An Antitrust Analysis of Bundled Loyalty Discounts*, 26(5) *International Journal of Industrial Organization*, 1132–1152 (2008).

46. In particular, Article 17(2) to 17(5) end with a qualifier in that they must be applied “without justifiable cause”. The National Development and Reform Commission (NDRC)'s guidelines on price-related abuse (Rules against Pricing-related Monopolies, effective February 1, 2011) offer such examples as how price reduction of fresh, seasonal, expiring, and overstock commodities may be legitimate. The State Administration for Industry and Commerce (SAIC)'s guidelines on non-price related abuse (*Rules of Administration for Industry and Commerce on Prohibition of Market Dominance*, effective February 1, 2011) provide two factors: a) normal business activities; b) effects on efficiency, public interest and economic development.

47. For example, news reports indicated that Costco, a large US big-box store, has benefitted from higher gasoline prices by using a strategy of pricing their gasoline below local competing gasoline stations in order drive its sales inside the store. See <http://www.forbes.com/sites/abrambrown/2012/05/24/costco-profit-tops-estimates-on-rising-gasoline-prices/>.

48. For a review of empirical studies on vertical contractual practices, as a reflection of Oliver Williamson's work on transactional economics, see Francine Lafontaine and Margaret Slade, *Transaction Cost Economics and Vertical Market Restrictions - Evidence*, 55(3) *Antitrust Bulletin*, 587–611 (2010).

49. For more details, see Zhenguo Wu, *Perspectives on the Chinese Anti-Monopoly Law*, 75 *Antitrust Law Journal*, 73–116 (2008).
50. Generally, these tests require some observations and then, make inferences from the observations. The “profit sacrifice” test observes that a firm is forgoing short term profit, and then it assesses whether the firm’s conduct is irrational but for the elimination or restriction of competition. However, a possible issue with this test is that firms investing in research and development are losing profit in the short run, though if they are successful in their investments, they may be able to eliminate or restrict competition by offering better products. The “no economic sense” test avoids this investment issue by suggesting that it should be illegal for a firm to harm competition and be the only benefactor of the firm’s conduct. In the example, the firm’s conduct should not be illegal, since the firm and society may benefit from the firm’s investment. A problem with this test is that we may not be able to observe how society may benefit. The “equally efficient competitor” test suggests that firms should not exclude equally efficient competitors. However, we may not be able to observe whether or not firms are equally efficient. For example, entrants may not be as efficient as incumbents in the short run but will be in the long run.
51. For more a detail discussion on the implications of these legal tests, see Keith N. Hylton, *The Law and Economics of Monopolization Standards*, *Antitrust Law and Economics*, 4 *Encyclopaedia of Law and Economics*, Second Edition, Edward Edgar, 82–115(2010).
52. Daniel L. Rubinfeld remarks on how Oliver Williamson had early insights on recognizing the use of economists in antitrust trials before the court appointed economic experts. In an early predation case, Williamson provided analysis that focused on the key economic issues and methodologies, which indirectly caused the convergence of views by experts. The predation case was *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227 (1st Cir. 1983). See Oliver Williamson, *Pretrial Uses of Economists: On the Use of ‘Incentive Logic’ to Screen Predation*, 29 *Antitrust Bulletin*, 475–500 (1984) and Daniel L. Rubinfeld, *On the Pretrial Use of Economists*, 55(3) *Antitrust Bulletin*, 679–697 (2010).
53. Economics refers to this problem as the informational asymmetry between a principal and an agent. The agent has more information than the principal and has strategic incentives to exploit the information asymmetry.
54. See *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 US 579, 591 (1993). The decision referred to an evidentiary rule, Rule 706 of the Federal Rules of Evidence, for guidance.
55. See Beijing Intermediate People’s Court No. 1, *Tangshan Renren Information Service Co., Ltd. v. Beijing Baidu Network Technology Co. Ltd.*, [2009] Yi Zhong Min Chu Zi No. 845, December 18, 2009. Upheld on appeal by Beijing High People’s Court, *Tangshan Renren Information Service Co., Ltd. v. Beijing Baidu Network Technology Co. Ltd.*, [2010] Gao Min Zhong Zi No. 489, July 9, 2010.
56. There are generally two ways for listings to be displayed. One way is to display two columns, with one listing links based on relevancy and the other listing links based on payment. Another way is to only have one column, but to add indicators that show whether the links are based relevancy or payment.
57. For more details, see Angela Huyue Zhang, *Using a Sledgehammer to Crack a Nut: Why China’s Anti-Monopoly Law was Inappropriate for Renren v. Baidu*, 7(1) *Competition Policy International*, (2011).
58. For example, a website for a golf course may choose to bid and ultimately, buy words, such as “golf” and “course.” In any searches for golf courses, the link to this golf course website will then be placed ahead of other golf course websites. For more details on how a search engine provider works, a description is available at <http://computer.howstuffworks.com/internet/basics/search-engine1.htm>.

59. We do not have information on what exactly the defendant was doing for the plaintiff.
60. The plaintiff made less payment on July 2008 and made the following comparisons: a) From June 10 to July 9, 2008, there were 88,095 IP and 251,684 PV browses but from July 10 to August 9, 2008, there were 18,340 IP and 123,905 PV browses; b) On September 25, 2008, the plaintiff also found that there were four pages in Baidu's listings for its website, www.qmyyw.com, while there were 6,690 pages in Google's listings.
61. For more details on the evidence and legal arguments from the case, see Tong Shu, *Reflections on Baidu Monopoly Litigation: Comments on Renren v. Baidu*, No 1 China Patents & Trademarks, 66–71 (2010).
62. See Angela Huyue Zhang, *supra* note 56, p. 283.
63. The defendant seems to have relied on a decision made by the US lower court in *Kinderstart.com, LLC v. Google, Inc.*, Case No. C 06-2057 JF (RS) (N.D. Ca., March 16, 2007). In this case, the plaintiff alleged that the defendant's search engines had discriminated against the plaintiff's websites. The court ruled in favor of the defendant. In particular, the plaintiff had claimed two relevant markets, "search" market and "search ad" market. The plaintiff argued that the "search" market was a relevant market, since such a market must be free because of user's experience and expectations, as well as government policies. The court pointed out that the defendant had not cited any authority "indicating that antitrust law concerns itself with competition in the provision of free services," and that the plaintiff had not alleged that anyone has paid the defendant to search. For these reasons, the court ruled that the plaintiff had not established the "search" market as a relevant market. The court also did not recognize the plaintiff's claim of "search ad" market as being distinct from other Internet advertising, since the plaintiff offered no support. A copy of the decision is available at http://wsgr.com/attorneys/BIOS/PDFs/kinderstart_google.pdf.
64. See Tong Shu, *supra* note 60.
65. Renren cited a Chinese Securities Journal article that claimed Baidu had 65.8% market share in China. Renren also used Baidu's own website, which indicated that the company had over 70% market share. Neither the article nor the website described the markets that the shares were based on, such as the search engine advertising market or the search engine market.
66. Search engines, such as the defendant's, usually will rank websites based on how much they pay and how relevant the websites are. However, websites may be able to exploit the ranking by relevancy instead of ranking by payment. For example, golf course websites may be ranked according to the number of links they have to other golf course websites. A website selling golf clubs may gain a higher ranking by adding links to golf course websites. In turn, search engines have adjusted their ranking system to prevent such exploitations. Google offers guidelines to websites in order to avoid being treated accidentally as an exploitative website by their search engine, a document which is available at <http://support.google.com/webmasters/bin/answer.py?hl=en&answer=35769>.
67. For more details on the economic theories of two-sided markets and defining markets in cases involving two-sided markets, see David S. Evans, *Two-Sided Market Definition*, ABA Section of Antitrust Law, *Market Definition in Antitrust: Theory and Case Studies*, forthcoming (2011). Among enforcement authorities, defining two-sided markets remain an issue that is not settled. See OECD Roundtables, *Two-Sided Markets*, (2009). This document is available at <http://www.oecd.org/daf/competition/44445730.pdf>.
68. For a discussion on how the court recognized the two-sided market but did not consider the impacts of this feature, such as market definition and competitive effects, see Angela Huyue Zhang, *supra* note 55.
69. In order to cater towards the user's preferences, placement advertising would usually require users to be tracked, which may not be possible for privacy reasons, and also may not reach a relatively wider audience than advertising through keywords.

70. For a possible technique for relating market power with profits, see Michael A. Williams, Kevin Kreitzman, Melanie Stallings Williams, and William M. Havens, *Estimating Monopoly Power with Economic Profits*, 10 UC Davis Business Law Journal, 125–150 (2010).
71. Delineating the relevant markets with respect to keyword advertising and placement advertising were possible issues in Google's acquisition of DoubleClick. For information on this acquisition, the US FTC's decision is available at <http://www.ftc.gov/opa/2007/12/googledc.shtm> and the E.C. decision is available at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/426>.
72. John Asker provides a model consisting of vertical segments that allows for exclusive distribution. By estimating the model, the paper tests whether exclusive dealing can lead to foreclosure. See John Asker, *Diagnosing Foreclosure due to Exclusive Dealing*, mimeo, (2005).
73. Antitrust authorities have an advantage in obtaining information from the defendants in that they have formal powers.
74. See Beijing Intermediate People's Court No. 2, *Li Fangping v. China Netcom (Group) Co. Ltd. Beijing Branch*, [2008] Er Zhong Min Chu Zi No. 17385, December 18, 2009. Upheld on appeal by Beijing High People's Court, *Li Fangping v. China Netcom (Group) Co. Ltd. Beijing Branch*, [2010] Gao Min Zhong Zi No. 48, June 9, 2010.
75. As well, non-registered residents could not buy bundles of fixed-line services along with other telecommunication services.
76. For more details on the case, see Susan Ning, Ding Liang and Angie Ng, *Li Fangping vs China Netcom — Abuse of Dominance Case Dismissed*, China Law Insight, September 19, 2010. This document is available at <http://www.chinalawinsight.com/2010/09/articles/corporate/antitrust-competition/li-fangping-vs-china-netcom-abuse-of-dominance-case-dismissed/>.
77. For example, see William J. Baumol and Daniel G. Swanson, *The New Economy and Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of Market Power*, 70 Antitrust Law Journal, 661–686 (2003).
78. Alternatively, all firms may be implicitly participating in some collusive acts that raise prices.
79. See Huzhou Intermediate People's Court, *Huzhou Yiting Termite Control Services Co., Ltd. v. Huzhou City Termite Control Research Institute Co., Ltd.*, [2009] Zhe Hang Zhu Chu Zi No. 553, June 7, 2010. Upheld on appeal by Zhejiang High People's Court, *Huzhou Yiting Termite Control Services Co., Ltd. v. Huzhou City Termite Control Research Institute Co., Ltd.*, [2010] Zhe Zhi Zhong Zi No. 125, August 27, 2010.
80. The local authority was responsible for assuring the requirements issued by the Ministry of Construction were met by any firms wishing to engage in termite prevention services.
81. For more details on the case, see Susan Ning and Ding Liang, *Termites and Abuse of Dominance*, China Law Insight, October 8, 2010. This document is available at <http://www.chinalawinsight.com/2010/10/articles/corporate/antitrust-competition/termites-and-abuse-of-dominance/>.
82. With these cases on the abuse of dominant market positions, the JI and the decisions have indicated that the plaintiff has to support harm to competition. In contrast to some monopolistic agreements, the JI burdens the defendant with having to prove that competition has not been harmed. The JI seems to follow the notion that price fixing is generally bad for society, but instead of using a *per se* prohibition of all monopolistic agreements, the JI places the burden on the defendant.