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What is the Welfare Standard?
(Forthcoming in REV. OF INDUSTRIAL ORG.)

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USC Center in Law, Economics and Organization
Research Paper No. C11-18
USC Legal Studies Research Paper No. 11-25

CENTER IN LAW, ECONOMICS AND ORGANIZATION RESEARCH PAPER SERIES and LEGAL STUDIES RESEARCH PAPER SERIES

University of Southern California Law School
Los Angeles, CA 90089-0071

SEPTEMBER 3, 2011
FORTHCOMING *REVIEW OF INDUSTRIAL ORGANIZATION*

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Abstract: China's Anti-Monopoly Law (AML) sets forth the country's antitrust enforcement policies. We investigate what welfare standard the AML seeks to maximize by examining both its stated language and, via revealed preference, the antitrust actions taken by the Anti-Monopoly Enforcement Authority.

Key Words: Antitrust, Merger, Welfare Standard

JEL Classifications: L4 · L43 · L44

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* We are grateful to Adrian Emch, Ping Lin, Dennis Lu, David Round, Marc Waha, and Mark Williams, as well as participants at the Workshop on China's Anti-Monopoly Law (at Lingnan University, Hong Kong, June 15, 2010) for helpful discussions and comments on earlier drafts of this paper.

1. Introduction

After nearly 14 years of drafting and debate, China's Anti-Monopoly Law (AML) was adopted by the People's National Congress on August 30, 2007 and went into effect on August 1, 2008.[1] The AML establishes fundamental regulations for the country's market practices and sets restrictions on various monopolistic business practices, with the aim of solving key antitrust issues associated with the development of open and free markets. The AML is a tremendous leap forward for China, giving it a crucial role in global antitrust governance.

Although China's AML is based in substantial part on the established body of antitrust law in the European Union (EU), the United States (US), and Canada, the provisions of the AML reveal interesting ambiguities and uncertainties regarding some basic issues. Of particular interest to this paper is the welfare standard applied in the AML. As defined by Motta (2004), "economic welfare is the standard concept used in economics to measure how well an industry performs" and "is a measure which aggregates the welfare (or surplus) of different groups in the economy."[2] Consider, for example, a proposed merger that likely would cause different effects on the welfare of consumers and producers. In the context of antitrust policy, a welfare standard provides the basis for evaluating how antitrust authorities consider these different welfare effects.

Alternative welfare standards can be categorized by the different weights given to the interests of different market parties, primarily producers and consumers. The "consumer surplus" welfare standard focuses on the effects of a merger (or other antitrust issues) on consumer surplus, requiring that expected efficiency gains be sufficiently large to offset any expected loss

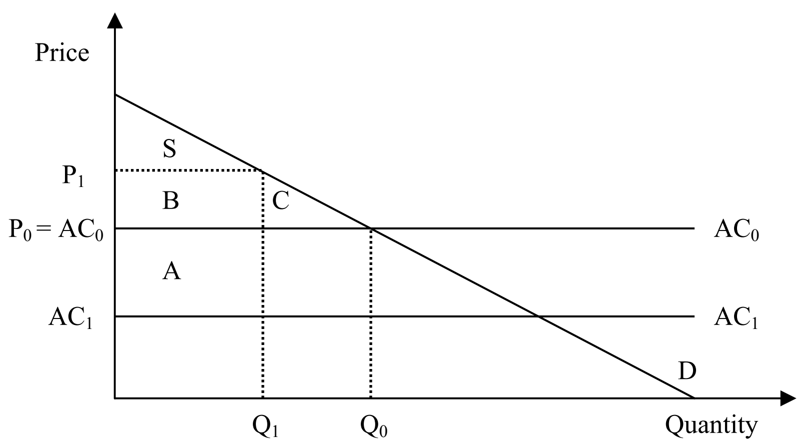
[1] The Anti-monopoly Law of the People's Republic of China, Order of the President of the People's Republic of China No. 68, unofficial English translation available at http://www.lawinfochina.com/law/display.asp?id=0&cGid=96789 (last visited on March. 25, 2011).

[2] See Motta (2004), p. 18.

of consumer surplus from anticompetitive business practices (e.g., Pittman 2007).[3] On the other hand, the "total surplus" welfare standard takes into account as well a merger's effects on producers' profits and evaluates a merger based on its impact on the sum of consumer and producer surplus, which requires that expected producers' efficiency gains be only large enough to offset the expected deadweight loss from anticompetitive business practices.[4]

These welfare concepts can be readily understood using the classic diagram introduced by Williamson (1968). Figure 1 shows that, prior to a merger, the market price equals P_0, which in turn equals the industry average cost, AC_0. At that price, consumers purchase the quantity Q_0. Consumer surplus equals the area below the market demand curve *D* and above the market price P_0, i.e., the area equal to S + *B* + *C.* With a market price of P_0 and a flat industry average cost curve, producer surplus equals zero.

Figure 1: Alternative Welfare Standards



Following a merger that creates market power, output drops to Q_1 and the market price increases to P_1. The merger also creates efficiencies that lower the industry average cost curve to

[3] Consumer surplus is the difference between (1) the amount of money that a consumer would willingly spend to purchase a product and (2) the amount of money that the consumer actually spends.

[4] Producer surplus is the difference between (1) the amount of money that a producer actually receives for producing a product and (2) the amount of money for which the producer would willingly produce the product. Deadweight loss is the monetary value of the reduction in consumer and producer surplus caused by an anticompetitive business practice.

AC_1. As a result, consumer surplus decreases by the area $B + C$, where B represents the monetary transfer from consumers to producers and C represents the deadweight loss caused by the exercise of market power. Producer surplus equals the area $B + A$, where A represents the cost savings from the merger. We can now define the alternative welfare criteria as follows:

- *Consumer Surplus Standard*: a merger is approved if the cost reduction offsets any increase in market power, so that the post-merger price does not exceed P_0, i.e., post-merger consumer surplus $\geq S + B + C$.
- *Compensated Consumer Surplus Standard*: assuming the merger results in market power that causes the market price to increase to P_1, a merger is approved if $A > B + C$, i.e., the efficiency gains exceed the loss in consumer surplus. This is called the "compensated" consumer surplus standard because given their cost savings (A), producers could in principle compensate consumers for their loss in consumer surplus ($B + C$).
- *Total Surplus Standard*: a merger is approved if $A + B + S > B + C + S$, or $A > C$, i.e., the efficiency gains exceed the deadweight loss.
- *Weighted Surplus Standard*: a merger is approved if $w(B + C) < (1 - w)(A + B)$, i.e., the weighted loss in consumer surplus is less than the weighted gain in producer surplus. Here the policy maker places some weight w on the welfare of consumers and some weight $(1 – w)$ on the welfare of producers.

In a dynamic context, a short-run total surplus standard could be equivalent to a long-run consumer surplus standard. For example, a merger could create efficiencies that do not benefit consumers in the short run through immediate reductions in marginal costs, but that do benefit consumers in the long run by, for example, increasing investments in R&D (Carlton 2007). Some economists also introduce separate concepts that account for dynamic impacts or more general social effects. For instance, Gifford & Kudrle (2005) propose a "productivity growth" welfare standard that assigns weight to the dynamic and long-term effects of mergers such as long-term cost reductions.

All antitrust policies embody, either implicitly or explicitly, a welfare standard, against which the likely effects of mergers or other competitive issues can be evaluated. Since the welfare standard directly determines how the AML will be enforced, it is crucial to clarify the standard on which the AML is based.

The rest of the article is arranged as follows. In section 2, we discuss the welfare standard embodied in the AML. In sections 3 and 4, we summarize the debate on alternative welfare standards and illustrate the application of welfare standards in the context of antitrust enforcement in US, EU, and Canada. In section 5, we return to China's AML and assess the implicit welfare standard based on the major cases decided to date by the agencies. Section 6 briefly comments on the AML enforcement for matters other than mergers, and section 7 contains our conclusions.

2. What Welfare Standard is Embodied in the AML?

The purpose of the AML is established in Article 1:

> This law will be enacted for the purpose of guarding against or ceasing monopolistic conduct, safeguarding and promoting the order of market competition, improving economic efficiency, protecting the consumer's interest, protecting the public interest, and promoting the healthy development of the socialist market economy.

In general, this article strongly implies the AML's intent to protect consumer welfare by shielding consumers from the potential negative effects of monopolistic conduct, especially the creation of market power and the resulting price increases. However, the last part of Article 1 appears to expand the purpose of the AML beyond protecting consumer welfare and could even imply a total surplus standard. Note that "improving economic efficiency" puts explicit weight on the potential efficiency gains of mergers, which is often the primary rationale offered by firms proposing to merge.

The AML also appears to go beyond the welfare of market players in the directly affected markets. For example, "protecting the public interest" can be interpreted as intending to protect the welfare of the whole of society in matters such as environmental or national security issues. Furthermore, the last phrase in Article 1, which states a purpose of "promoting the healthy development of the socialist market economy," creates some uncertainty in terms of the welfare standard. The term "socialist market economy" generally refers to an economic system where the major industries are owned by the state, but firms in those industries compete on the basis of price, with relatively little intervention from the state.[5] In this regard, the goal of "promoting the healthy development of the socialist market economy" could be interpreted as putting particular weight on the interests of state-owned enterprises (SOEs), which could result in protection for one particular group of producers. Over-protection of SOEs could reduce their incentives to improve economic efficiency. Such over-protection also could enable SOEs to exercise substantial market or monopoly power, which would impair the goal of "improving economic efficiency" in the long run.

Given the goals of the AML (as stated in Article 1), Article 27 stipulates factors that will be considered in examining a merger. These factors include the likely effects of the proposed merger on consumers and other producers; whether the merger will create or enhance barriers to

[5] See Shi (1998) for a review of the establishment of the socialist market economy in China.

entry; how it will affect the advancement of technology; and its overall effect on national economic development. These factors cover both consumer welfare and efficiency gains, which suggests a compensated consumer surplus standard or a weighted surplus standard.

Article 28 in the AML states that even if a merger eliminates or restricts market competition, the Anti-Monopoly Enforcement Authority may decide not to prohibit it if the advantages of implementing the merger exceed the disadvantages, or if the merger is in harmony with the public interest.[6] Although the potential advantages or disadvantages are not specified in Article 28, it can be read as providing merging firms with an opportunity to argue that gains in producer surplus offset reductions in consumer surplus caused by enhanced market power. By this interpretation, the AML would use a total surplus welfare standard.

The AML exempts certain conduct by SOEs in strategic sectors.[7] As stated in Article 7: "Industries controlled by the State-owned economy and relied upon by the national economy and national security . . . shall be protected by the State to conduct lawful operation by the undertakings." That is to say, the enforcement agencies of the AML will not have the jurisdiction to control certain conduct by SOEs with monopoly power. Instead, the State has the responsibility to "supervise and control the price of commodities and services provided by these undertakings and the operation of these undertakings so as to protect the interests of the consumer and facilitate technical progress." The exemption of certain conduct by State-owned monopolies from the AML creates some uncertainty regarding whether the welfare of consumers in these strategic sectors will be effectively protected, and how the AML enforcement agencies

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[6] The AML does not specifically define "public interest."

[7] According to an announcement by the State Assets Management Commission on December 5, 2006, seven strategic industries, consisting of national defense, electricity, petroleum, telecommunications, coal, airlines, and waterway transportation, will be controlled by SOEs. See *SOEs to Maintain Dominant Control Over Seven Industries in China* Xinhua Net, December 19, 2006, http://news.xinhuanet.com/fortune/2006-12/19/content_5504591.htm (last visited on August 30, 2011).

will treat SOEs in other industries. Although the interests of SOEs are presumed to be aligned with the public interest, some economists believe that SOEs could be more likely than their privately owned counterparts to take anticompetitive actions (e.g., Sappington & Sidak 2003). Therefore, the close administrative relation between SOEs and the government could result in the agencies enforcing the AML unfairly by favoring producers over consumers when examining mergers involving SOEs and, thus, applying a welfare standard with less weight on consumer surplus. In addition, the AML suggests a high priority for "economic development,"[8] which is consistent with China's current status as a developing economy. The special attention paid to a merger's potential effects on economic development could imply a welfare standard that places more weight on producers' gains. For example, the agency might be relatively lenient towards the producer if its profit gains or surplus are deemed to be an important source for investment in technologies that potentially improve productivity.

Although the AML contains extensive provisions protecting competition and the economic interests of consumers (see Articles 13 and 14), it also includes an article specifically dedicated to possible exceptions to these provisions. In particular, Article 15 lists seven exceptions for conduct that otherwise would be prohibited by the anti-monopoly provisions in Articles 13 and 14.

The first of these exceptions allows monopoly agreements that have "the purpose of improving techniques, researching, and developing new products." This exception appears to focus on long-run gains stemming from investments by competing firms in research and development that result in new products.

[8] For example, see Article 1 and Article 27.

The second exception allows monopoly agreements "for the purpose of upgrading quality, reducing costs, improving efficiency, unifying product models and standards, or carrying out professional labor distribution." This exception appears to focus on efficiency gains in the production of existing products that can be passed on to consumers in the short run. The clause referring to "unifying product models and standards" is interesting because it appears to allow the establishment of "standard-setting organizations," which has been a contentious antitrust issue.[9]

The third exception allows monopoly agreements "for the purpose of improving operational efficiency and enhancing the competitiveness of small and medium-sized enterprises." This statement could be interpreted as providing some protection to small and medium-sized enterprises from competition with large companies.

In the fourth provision an exemption is granted to monopoly agreements designed "for the purpose of maintaining public welfare such as conserving energy, protecting the environment, providing disaster relief, and etc." This exemption seems to be motivated by a total surplus welfare standard, which takes into account "non-economic" objectives. Such objectives could create some confusion in enforcement. For example, firms in a price-fixing agreement might argue that their cartel conserved energy or protected the environment.

The fifth exception allows monopoly agreements, "for the purpose of alleviating the severe decrease of sales volume or excessive overstock due to economic depression." This statement appears to aim to protect the economy from "destructive competition."[10] This

[9] The economic rationale for standard-setting organizations is that they can improve the productivity or efficiency of an industry by making the technologies utilized by different manufacturers compatible with one another. However, the monopoly power potentially stemming from such cooperative organizations can give rise to antitrust issues. See, e.g., Farrell, et al. (2007).

[10] See, e.g., Deneckere, Howard, & Peck (1997).

exception does not appear in antitrust laws of other countries, implying the particular stress that the Chinese government places on market stability.

The sixth exception allows monopoly agreements "for the purpose of protecting the legitimate interests of international trade and foreign economic cooperation." Given the vagueness of the term "legitimate interests," this exception could be interpreted either as an effort to encourage international trade and cooperation between Chinese enterprises and foreign competitors, or as an effort to protect domestic enterprises from competition with foreign rivals (Bush 2007).

Finally, the last exception leaves the Chinese government with a great discretionary power as to which practices will be permissible under the new law. The clause provides that "other cases stipulated by the law or the State Council" will be exempt from the anti-monopoly provisions in Articles 13 and 14. This could allow for *ad hoc* exceptions and thus increase uncertainty on the part of the business community regarding which practices the AML proscribes.

To sum up, the AML appears to encapsulate several different goals, not only emphasizing the impact of mergers on consumers, but also taking into account the welfare of producers and of the state overall. These goals are not mutually compatible in general. How the Anti-Monopoly Law enforcement authority will (1) weigh consumer and producer surplus and (2) reconcile these potentially conflicting goals given the idiosyncratic nature of China's political and economic environment remains an open question at this time.

3. Debates on Alternative Antitrust Welfare Standards

There has been a long debate over which welfare standard antitrust policy should pursue. Antitrust law in the US was created to combat monopoly and its negative effects on the economy, and especially on consumers. The Sherman Act was passed in 1890 to limit cartels and monopolies. The subsequent Clayton Act of 1914 explicitly stated the goal of protecting consumers from being harmed in their business or property by anticompetitive conduct. Antitrust regulators, therefore, naturally focused on the protection of consumer welfare given the anticompetitive conduct of monopolies and cartels. Moreover, this welfare standard was supported by the consensus view of economists, who concluded that anticompetitive conduct reduced consumer surplus and resulted in deadweight welfare losses. However, as noted earlier, Williamson (1968) challenged this consensus and pointed out the possibility of improved efficiencies that could result from a merger.[11] The famous "Williamson tradeoff," which remains a key argument for proponents of the total surplus standard, refers to a situation in which a merger leads to a price increase and a cost decrease. The price increase lowers consumer welfare, but the cost decrease raises producer surplus. Which effect is larger depends on the particular facts of a given merger. Proponents of the total surplus standard also criticize the implied tolerance for monopsony under the consumer surplus standard (Carlton 2007). That is, a strict application of the consumer surplus standard would support the legality of buyers' cartels. Moreover, many mergers involve intermediate products where both buyers and sellers are firms. In such a circumstance, the consumer surplus standard is problematic because no welfare criterion exists that would favor the interests of downstream firms over upstream firms (Farrell & Katz 2006).

[11] Williamson's analysis has been criticized and improved by several authors. See, for instance, Deprano & Nugent (1969).

The total surplus welfare standard, however, remains controversial. For example, Pittman (2007) argues that a consumer surplus standard is appropriate because transfers from consumers to firm owners (producers) are mostly regressive, i.e., the same amount of wealth means much more to consumers than it does to firm owners, assuming that owners are generally in the higher tiers of income and wealth. Alternatively, some economists propose to apply a "general equilibrium approach" to reconciling the issue of income distribution. For instance, Gifford & Kudrle (2005) propose the concept of the "whole citizen standard," which "reflects the fact that firm owners and product purchasers are overlapping sets of persons: in essence, consumers are also likely to be producers through their ownership of capital." That is to say, producers and consumers could have aligned interests, considering the fact that consumers could also be firms' shareholders. Thus, the problem becomes the tradeoff between the losses accrued as consumers and gains made as shareholders. However, the overlap between consumers and shareholders is likely to be relatively small. In addition, this argument is weakened by the extensive literature that finds only minimal positive aggregate shareholder gains from mergers, which implies that only a small group of people, such as top management, benefit from mergers (Mandelker 1974, Bruner 2002, Shleifer & Vishny 1988).[12]

Most economists agree that the total surplus standard is a more appropriate ultimate goal for antitrust policy than the consumer surplus standard (Farrell and Katz 2006). After all, antitrust policy is oriented more towards improving economic efficiency than altering the distribution of income. However, the total surplus standard is more vulnerable to enforcement errors than the consumer surplus standard, given uncertainty and asymmetric information. For

[12] Gifford & Kudrle (2005) provide another perspective with which to examine the competitive effects of mergers involving SOEs in the Chinese socialist market economy. Specifically, if SOEs could be considered as owned by all people in China, gains to them (producers) would eventually benefit all consumers. However, one needs to be cautious about the weight placed on this argument to avoid an overly permissive Chinese antitrust policy towards SOEs.

instance, the long-run efficiency gains and effects on innovation from a given merger are subject to substantial *ex ante* uncertainty, and the merging parties have more accurate (private) information regarding the merger's likely short-run and long-run effects on producer surplus than do the antitrust authorities. Conversely, the consumer surplus standard can be implemented in a relatively transparent way, based primarily on expected changes in post-merger prices. Therefore, many economists and lawmakers agree that although total surplus standard is optimal "in theory," the consumer surplus standard is superior from a policy perspective (e.g. Pittman 2007).

4. Welfare Standards in the US, EU, and Canada

The decisions made by antitrust enforcement agencies in different countries illustrate implicitly their underlying welfare standards. This section illustrates the welfare standards used by different antitrust enforcement agencies in the US, EU, and Canada.

4.1 United States

US antitrust policy is based on a consumer surplus welfare standard, as it mainly focuses on the effect of a merger or other antitrust issue on prices paid by consumers. Although the *Horizontal Merger Guidelines*, originally issued in 1968 and subsequently revised several times,[13] have over time put some weight on efficiencies, enforcement remains consistent with the pass-through requirement. Thus, efficiency gains (in most cases, cost savings) are taken into account only if they are likely contribute to consumer welfare, largely through anticipated reductions in marginal costs expected to lead to lower prices, all else equal.

[13] The latest version of the Horizontal Merger Guidelines was published on August 19, 2010, available at http://www.justice.gov/atr/public/guidelines/hmg-2010.html (last visited on August 30, 2011).

In practice, the consumer welfare standard has been translated into a "price standard." This standard examines whether the expected price increase resulting from enhanced market power caused by a proposed merger likely will be offset by the expected price reduction resulting from reductions in marginal costs. This principle is illustrated by the *Federal Trade Commission v. Staples* case.[14] This case involved the proposed merger of Staples, Inc. and Office Depot, Inc., two of the three largest office-supply superstores in the US. The FTC estimated that the proposed merger would cause (1) a 7.3% price increase in the affected regions and (2) a 0.15% price decrease from lower marginal costs, thereby concluding that the proposed merger would result in a 7.1% net price increase in the affected regions. The FTC sued to prevent the proposed merger. The US District Court, District of Columbia granted a preliminary injunction to block it, after which Staples and Office Depot dropped the proposed merger.

In particular industries, such as telecommunications, the process in the US may involve a "dual agency review." Telecommunications mergers are reviewed by the Federal Communications Commission (FCC), which also enforces competition policy in that sector. The FCC has a statutory standard of judging that any merger involving the transfer of telecommunications licenses is in "the public interest convenience and necessity."[15] In contrast to the FTC and DOJ—where the agency can only sue to block a merger that is harmful—the FCC must make a positive finding that the merger is beneficial. In theory the public interest standard might allow the FCC to approve a merger by considering efficiencies that the antitrust authority would not approve. For example, in a merger of wireless phone companies the FCC would consider the increased efficiencies in spectrum usage by combining contiguous spectrum and eliminating the need for guard bands. However, in practice this divergence does not happen.

[14] 970 F. Supp. 1066, 1070 (D.D.C. 1997).

[15] See the Federal Communications Act of 1934 as amended.

As a matter of practice the FCC's review process follows the DOJ guidelines explicitly and we are unaware of a case where the agencies have differed in their opinions.[16]

4.2 European Union

The EU has largely adopted a consumer surplus standard, although it does place some weight on producer surplus (Renckens 2007). In particular, EU antitrust law provides an exemption for cases that will ultimately benefit the economy by "improving the production or distribution of goods or to promoting technical or economic progress." Nevertheless, the EU stresses that the efficiency gains should be verifiable, merger-specific, and provide consumers "a fair share of the resulting benefits."[17]

In practice, the EU has occasionally deviated from the consumer surplus standard and has treated merger-specific efficiencies as a negative factor (Gifford & Kudrle 2005). For instance, both the proposed Boeing/McDonnell Douglas[18] and GE/Honeywell[19] mergers were challenged on the grounds that the merged entities would gain competitive advantages over their rivals due to merger-specific efficiencies, raising the possibility that rival firms would be unable to compete. The EU's action to protect inefficient rival firms is, however, inconsistent with both the consumer surplus and total surplus welfare standards.

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[16] For an example of the FCC's antitrust analysis see "In the Matter of Echostar Communications, General Motors Corp and Hughes Electronics Corp: Hearing Designation Order," FCC 02-284. One can compare the FCC's analysis with the Justice Department's analysis in "U.S. v. Echostar Communications, Hughes Electronics, General Motors Corp., and DirecTV Enterprises: Complaint," Case number 1:02CV02138.

[17] See Article 81(3) of Consolidated Version of the Treaty Establishing the European Community, http://eur-lex.europa.eu/en/treaties/dat/12002E/htm/C_2002325EN.003301.html (last visited on August 30, 2011).

[18] Case No. IV/M.877, Boeing/McDonnell-Douglas, 1997 O.J.

[19] Case No. COMP/M.2220, General Electric/Honeywell, 2004 O.J.

4.3 Canada

Section 96(1) of the Canadian *Competition Act* states that a merger may be allowed if it "is likely to bring about gains in efficiency that will be greater than, and will offset, the effects of any preventing or lessening of competition."[20] Canadian competition law evaluates mergers using a "balancing weight" standard that considers both consumer and producer surplus. Under this standard, gains in producer surplus are required to equal or exceed losses in consumer surplus, with specific weights being applied to the values of producer surplus and consumer surplus.[21] This is equivalent to the weighted surplus standard described in section 1. In reference to Figure 1, this standard requires $w(B + C) < (1 - w)(A + B)$, where w stands for the weight placed on consumer surplus.[22]

For example in the *Superior Propane* case,[23] the efficiency gains from the proposed merger over a ten-year period were estimated at A = \$29.2 million per year and the deadweight loss in consumer surplus was estimated at C = \$3.0 million per year. The total wealth transfer from consumers to producers was estimated at B = \$40.5 million per year. The initial decision by the Competition Tribunal was to allow the merger on the basis of the total surplus standard. The Court of Appeal rejected the unqualified application of the total surplus standard, favoring the "balancing weight" standard without committing to specific weights. In the redetermination decision, the Tribunal effectively calculated the critical weight w^* such that the weighted average of the changes in surplus equaled zero. In reference to Figure 1, the critical weight was

[20] Competition Act, section 96(1), available at http://www.laws.justice.gc.ca/PDF/Statute/C/C-34.pdf (last visited on August 30, 2011).

[21] For a discussion of factors to be considered in determining the weights, see Competition Bureau, "Bulletin on Efficiencies in Merger Review," available at http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/02982.html (last visited on August 30, 2011).

[22] Ross & Winter (2004) provide a systematic study of merger standards and the efficiency defense in the Canadian context. Their analysis shows that the enforcement of the Canadian law is close to the total surplus standard.

[23] *Commissioner of Competition v. Superior Propane Inc.*, 2000 Comp. Trib. 15 (August 30, 2000).

determined by $w^*(B + C) = (1 - w^*)(A + B)$, leading to a w^* value of approximately 0.62. In other words, the proposed merger would be rejected if the weight placed on losses in consumer surplus exceeded 1.6 times (i.e., $w^*/(1-w^*)$) the weight placed on gains in producer surplus. The Tribunal concluded that a weight on consumer surplus of more than 1.6 times the weight on producer surplus was not supported by a consideration of various factors, including progressivity of Canadian tax and social policy. In part relying on this finding, the proposed merger was approved.[24]

5. A Preliminary, Revealed Preference View of the AML's Welfare Standard

As of June 2010, approximately two years after the AML took effect on August 1, 2008, the Anti-Monopoly Bureau of the Ministry of Commerce ("MOFCOM") had accepted over 140 merger notifications and had completed its review of 90 percent of the cases. Among the completed cases, approximately one third had entered into the second phase of the review process[25] and less than three percent required a time extension to the merger review process. Approximately 95 percent of the reviewed merger notifications were approved unconditionally, six mergers were approved subject to conditions, and one merger was prohibited. Out of all filed notifications, 62 percent were horizontal mergers, 14 percent were vertical mergers, and the remaining 24 percent were categorized as conglomerate mergers, usually involving complementary products.[26] Thus, as MOFCOM has challenged only a few proposed mergers, we

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[24] See Ross & Winter (2004) for a detailed discussion of the *Superior Propane* case.

[25] MOFCOM will start the preliminary investigation (or "the first phase of review") if it determines that the submitted documents are complete. Within 30 days, MOFCOM will either approve the concentration or decide to conduct a further examination (or "the second phase of review"). If MOFCOM decides that a further examination is necessary, it will have to make a final decision on the case within another 90 days and notify the parties of the decision in written form. See Article 25 and 26 of AML.

[26] See the information from the press conference hosted by General Director of the Anti-Monopoly Bureau of MOFCOM, Shang Ming, regarding implementation of the AML. The transcript in Chinese is available at

have sparse data from which to infer the AML's revealed welfare standard. In addition, MOFCOM has not issued decisions for mergers that were approved unconditionally, and so we have no record of the welfare calculus performed in the majority of cases. Nevertheless, an examination of the challenged mergers does provide insights into the implied welfare standard. We now review in chronological order MOFCOM's actions regarding the one prohibited merger (Coca-Cola's proposed acquisition of China Huiyuan Juice Group Limited) and the six mergers approved with conditions attached. A brief summary of these cases is presented in Table 1.[27]

5.1 InBev/Anheuser Busch

On November 18, 2008, MOFCOM announced in a brief, one-page decision its conditional approval of the proposed acquisition of Anheuser Busch, the largest American brewer, by InBev N.V./S.A, the largest global brewer. MOFCOM's announcement implied a broad relevant market, namely beer sold in China. In evaluating the merger's likely competitive effects, MOFCOM appears to have focused largely on InBev's post-merger market share. The conditions imposed by MOFCOM constrained the ability of InBev to increase its ownership of other Chinese brewers. The decision does not provide sufficient information to infer what efficiency gains, if any, were considered, and how they were compared to the merger's potential anticompetitive effects.

With respect to the geographic market, MOFCOM's broad geographic market appears larger than would be delineated by the "smallest market principle" in the US *Horizontal Merger*

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http://www.mofcom.gov.cn/aarticle/ae/ai/201008/20100807078063.html (last visited on August 30, 2011).) More recent statistics are disclosed by Shang Ming, Director General of the Anti-Monopoly Bureau of the MOFCOM at the 7th International Symposium of Competition Law and Policy, held in Beijing on June 3-4, 2011. See China Competition Bulletin, Special Report, June 2011, at http://www.anzsog.edu.au/content.asp?pageId=261(last visited on August 30, 2011).

[27] Lin & Zhao (2011) provide an alternative review of merger control enforcement activities.

Guidelines. In fact, far from containing a single geographic market for the sale of beer, China consists of multiple geographic markets fragmented by discrete consumer preferences. These preferences are shaped by local culture, levels of education and income, distribution costs, and regional trade barriers erected by local authorities, e.g., arbitrary "inspection" fees charged on beer produced in other areas.[28] As a result of these geographic market segments, no single beer brand has a large share of total national beer sales.[29] Defining overly broad geographic markets can lead to underestimation of the market share of the parties at issue, which could raise the likelihood of type II decision errors (approving mergers that are likely to be anticompetitive) regardless of the welfare standard applied.

5.2 Coca-Cola/Huiyuan

On March 18, 2009, upon completion of the second phase of investigation, MOFCOM published a brief, one-page decision announcing its decision to block the proposed acquisition of China Huiyuan Juice Group Limited, China's largest juice maker, by the Coca-Cola Company, the world's largest soft drink company. MOFCOM defined two relevant markets: (1) carbonated drinks sold in China and (2) fruit juice sold in China. Coca-Cola was deemed to have a dominant share in the market for carbonated drinks sold in China. Although not revealed in the announcement, several other sources verify that the post-merger market share of the merged entity would not be deemed dominant in the fruit juice market, according to the provisions of Article 19 of the AML.[30] However, MOFCOM held that "branding effects" were particularly

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[28] See Cui & Liu (2000) for further discussion.

[29] The top three national beer brands in China account for only 14 percent of total volume. In contrast, the top three local beer brands in six key local beer markets account for 56 percent to 81 percent of sales. These six local beer markets are dominated by different sets of top, local beer brands. In contrast, the top three beer brands in the U.S. account for nearly 70 percent of total sales nationwide. See Slocum *et al.* (2006) for details.

[30] See Zhang & Zhang (2010).

important in the fruit juice market. It found that the proposed merger likely would substantially raise entry barriers given that the combined firm would own two of the most widely recognized fruit juice brands in China. MOFCOM also expressed its concern that the merged firm would have the ability and incentive to leverage a strong market position from the carbonated soft drink market to the fruit juice market by means of tying, bundling, or other exclusionary practices.[31]

In evaluating the proposed merger, MOFCOM appears to have applied a prospective approach in the sense that the potential adverse effects on competition were determined on the basis of the likely future behavior of the merged entity even though the incremental market power directly resulting from the proposed merger was marginal. With respect to the implied welfare standard, MOFCOM's goal was to prevent consumers from being harmed by higher prices and less product variety due to the expected dampened competition in the fruit juice market.[32] MOFCOM's decision on Coca-Cola/Huiyuan implies a strict consumer surplus standard.

5.3 Mitsubishi Rayon /Lucite

On April 24, 2009, upon the completion of the second phase of review, MOFCOM announced its decision to conditionally clear the proposed acquisition of Lucite by Mitsubishi Rayon. MOFCOM defined the relevant market as the sale of methyl methacrylate in China. For the first time, MOFCOM incorporated divestitures in its remedies in order to eliminate or reduce the likely adverse competitive effects of the proposed merger. Again, the lack of details made public by MOFCOM makes it difficult to know whether and how efficiency gains or producer surplus

[31] See Tan & Zhang (2009).

[32] "MOFCOM Spokesman Yan Jian Responds to Journalists Regarding the Antitrust Review of the Proposed Acquisition of Huiyuan Company Coca-Cola," Mar. 24, 2009, available at http://www.mofcom.gov.cn/aarticle/ae/ag/200903/20090306123715.html (last visited on August 30, 2011).

were considered. Nevertheless, the fact that the remedies were designed specifically to control the post-merger market power of the merged firm suggests MOFCOM's desire to prevent price increases. This enforcement action is more closely aligned with the consumer surplus standard than alternative standards.[33]

5.4 General Motors/Delphi

On September 28, 2009, MOFCOM announced its conditional approval for the proposed acquisition of Delphi (an auto-parts manufacturer) by General Motors (GM).[34] MOFCOM defined two relevant markets: (1) the sale of automobiles in China and (2) the sale of automotive components in China. As in the Coca-Cola/Huiyuan case, MOFCOM applied a prospective approach in the sense that the potential adverse effects on competition were determined based on the likely future behavior of the merged firm regardless of the minimal incremental market power directly resulting from the proposed merger. MOFCOM's announcement did not quantify the likelihood of the projected anticompetitive conduct, nor did the announcement discuss whether that conduct could be prevented by other laws and regulations. MOFCOM's stated desire to address the competitive concerns, as well as its reticence to give substantial weight to efficiencies, indicates that its decision was based on the consumer surplus welfare standard.

5.5 Pfizer/Wyeth

On September 29, 2009, one day after GM/ Delphi announcement, MOFCOM published its conditional approval for the proposed acquisition of Wyeth by Pfizer. MOFCOM defined five relevant antitrust markets, all for the sale of specific drugs for human or animal health sold in

[33] Some researchers cast doubt upon whether MOFCOM has sufficient enforcement capacity and expert resources to effectively implement these structural and behavioral remedies. See, e.g., Hao (2010) and Zhang & Zhang (2010).

[34] See MOFCOM Notice No. 76 (2009), available at http://file.mofcom.gov.cn/moffile/search/pages/detail.jsp?seqno=13953 (last visited on August 30, 2011).

China. In a welcome improvement to the public policy process, MOFCOM revealed more details on the rationale behind its decision. For the first time, MOFCOM cited HHI statistics as evidence of the potential adverse effect on competition. In particular, MOFCOM concluded that the post-merger HHI in the swine mycoplasma pneumonia vaccine market was high, with the merged firm having a 49 percent market share. Based on this finding, MOFCOM required that the merging parties divest Pfizer's swine mycoplasma pneumonia vaccine business in China. Its competitive concerns and the remedies it imposed on the merger indicate its desire to prevent post-merger price increases. Whether MOFCOM considered potential efficiency gains remains unclear, however. Its goal appears to be to maintain price stability, product quality, and product variety, all of which are consistent with a consumer surplus welfare standard.

5.6 Panasonic/Sanyo

On October 30, 2009, upon the completion of the second phase review, MOFCOM announced its conditional approval of the proposed acquisition of Sanyo by Panasonic. MOFCOM defined three different global markets for different types of batteries. Its primary anticompetitive concerns were high post-merger market shares and the inability of buyers to use bargaining power to counter any potential price increases. To prevent the merger's possible anticompetitive effects, MOFCOM required divestitures in each of the three global battery markets. Interestingly, the businesses required to be divested were primarily located in Japan—another indication of the global reach and importance of Chinese antitrust policy.

5.7 Novartis/Alcon

On August 13, 2010, MOFCOM announced its conditional approval for the proposed acquisition of Alcon by Novartis. MOFCOM defined both global and Chinese geographic markets for (1) ophthalmological anti-infection products and (2) contact lens care products. In the ophthalmological anti-infection product market, the merged firm would have a 55 percent share globally and a 60 percent share in China. The Chinese share was held almost entirely by Alcon, with Novartis having less than a one percent share. In order to limit the market share growth of the merged firm, MOFCOM ordered that Novartis could not sell its ophthalmological anti-infection products in China for five years.

In the contact lens care product market, the merged firm would have a 60 percent share globally and a 20 percent share in China. MOFCOM was particularly concerned with the exclusive supply contract between Novartis' Chinese subsidiary and Hydron Contact Lens Co., the largest firm in the relevant market with a 30 percent share in China. This agreement made Hydron Contact Lens Co. the sole distributor of the products of Novartis' Chinese subsidiary. MOFCOM concluded that the exclusive supply contract provided the merged firm the incentive and ability to coordinate with Hydron with respect to prices, quantities, and marketing regions so as to restrain competition and, on that basis, MOFCOM ordered that Novartis terminate its supply contract with Hydron.

This decision is consistent with the pattern that MOFCOM has tended to impose behavioral, rather than structural, remedies to address mild adverse horizontal or vertical effects. However, as in previous cases, MOFCOM did not provide enough detailed analysis and reasoning regarding whether and how efficiency gains and supplier surplus gains were considered, but its stated rationale and imposed remedies do suggest an intention to protect consumer welfare.

6. The AML Enforcement by NDRC and SAIC

Our discussion has focused on welfare standards implied by MOFCOM's merger enforcement actions. With respect to other antitrust enforcement aspects of the AML,[35] they are generally consistent with the consumer surplus standard, but also show deviations from that standard. In late 2010, the National Development and Reform Commission (NDRC) and the State Administration for Industry and Commerce (SAIC) officially announced the adoption of a set of regulations promulgated to prevent monopolistic pricing practices, abuse of market dominance, and abuse of administrative power under the AML. These regulations, which came into effect on February 1, 2011,[36] describe "justifiable reasons" that can exempt alleged monopolistic pricing practices and other kinds of market dominance conduct from enforcement action under the AML. Although the "Provisions Against Price Fixing" issued by the NDRC simply make reference to Article 15 of the AML for "justifiable reasons" regarding monopolistic pricing agreements,[37] the Provisions specify the "justifiable reasons" listed in Article 17 of the AML for most types of behavior that abuse an undertaking's dominant market position.[38] With respect to revealing an implicit welfare standard, one "justifiable reason" particularly allows a dominant firm to enter

[35] That is, price-related anti-competitive conduct (enforced by the National Development and Reform Commission) and non-price related monopoly agreements and abuse of market dominance actions (enforced by the State Administration for Industry and Commerce). See Zhang & Zhang (2011) for a review of comprehensive legal rules against monopolistic agreements and challenges in enforcements.

[36] "Provisions Against Price Fixing," Order of the National Development and Reform Commission No.7, unofficial English translation available at http://www.lawinfochina.com/law/display.asp?ID=8440&DB=1&keyword=(last visited on March. 25, 2011); "Provisions for Prohibition by Administrative Authorities for Industry and Commerce Against Monopolistic Agreement Acts," Order of the State Administration for Industry and Commerce, No. 53, unofficial English translate available at www.linklaters.com/pdfs/mkt/london/1a.pdf (last visited on August 30, 2011); "Provisions for Prohibition by Administrative Authorities for Industry and Commerce Against the Abuse of a Dominant Market Position," Order of the State Administration for Industry and Commerce, No.54, unofficial English translation available at www.linklaters.com/pdfs/mkt/london/1b.pdf (last visited on August 30, 2011); "Provisions for Prohibition by Administrative Authorities for Industry and Commerce Against Abusing Administrative powers to Eliminate or Restrict Competition," Order of the State Administration for Industry and Commerce, No. 55, unofficial English translation available at www.linklaters.com/pdfs/mkt/london/1c.pdf (last visited on August 30, 2011).

[37] "Provisions Against Price Fixing," Article 10.

[38] "Provisions Against Price Fixing," Articles 12, 13, and 14.

into an exclusive contract if the contract has the effect of "significantly reducing cost and improving efficiency and enabling consumers to share the interests derived therefrom."[39] By requiring the cost reductions to be shared with consumers, presumably in the form of lower prices, this "justifiable reason" for allowing a dominant firm to enter into an exclusive contract appears to pursue a consumer surplus standard.

In contrast, the "Provisions for Prohibition by Administrative Authorities for Industry and Commerce Against the Abuse of a Dominant Market Position" issued by the SAIC, appear to be more closely aligned with a total surplus standard. In particular, after specifying which conduct constitutes abuse of a dominant market position, the Provisions state that such conduct can be allowed for a "justifiable reason." In determining whether a justifiable reason exists, the administrative authorities are directed to consider (1) "whether the act concerned is taken by the business operator out of its own normal operational activities and normal efficiency" and (2) "whether the act concerned would affect the economic efficiency, public interest, and economic development."[40] How the NDRC and SAIC will enforce the AML following these provisions, and collaborate on cases involving both pricing and non-pricing conduct,[41] will shed more light on how these at times conflicting welfare standards will be pursued.

[39] "Provisions Against Price Fixing," Article 14.

[40] "Provisions for Prohibition by Administrative Authorities for Industry and Commerce Against the Abuse of a Dominant Market Position," Article 8.

[41] Although NDRC was designated to enforce the AML with respect to price-based anti-competitive activities, it investigated and announced its decision in 2010 in the "Detergent Powder Case," which involved abuse of a dominant market position by a state-owned company via tying/bundling. This case indicates 1) that there could be some potential jurisdictional conflicts between NDRC and SAIC over the enforcement of AML; and 2) that state-owned companies will not be exempted from enforcement of the AML. See Gu (2011) for detail,

7. Conclusions

The AML's stated welfare standard focuses on consumer surplus, but efficiency gains, especially dynamic efficiency improvements, are explicitly required to be taken into account. The AML also places weight on social objectives such as the promotion of a socialist market economy and the preservation of natural resources and the environment. These factors suggest the AML's welfare standard could be broader than simply a consumer surplus or total surplus standard.

A review of the seven challenged mergers to date suggests that primary weight is placed on consumer surplus. MOFCOM's actions suggest that it implicitly assumes a relatively high likelihood and cost of making a type II error (i.e., the "false negative" of permitting a merger that reduces welfare) and, thus, has made relatively conservative, pro-consumer decisions. This type of conservative enforcement can deprive consumers of long-term benefits from the potential efficiency gains. Also, some of MOFCOM's remedies, such as business divestitures and pricing constraints, could result in MOFCOM becoming too involved in monitoring or regulating the day-to-day operations of firms, which would demand a wide range of expertise and agency resources it appears to lack at present. If enforcement leads to excessive market intervention, consumer welfare could be harmed by the loss of market efficiency that could unintentionally distort the consumer surplus standard MOFCOM intended to apply. Only time will tell, but meanwhile the business community, law practitioners, and outside observers would all welcome more detailed discussions by MOFCOM of the bases for its decisions in order to provide greater enforcement transparency.

Table 1: Case Summary

Merger	Acquirer	Target	Market Definition	Anticompetitive Concern	Decision
InBev & A-B[42]	**InBev N.V./S.A.:** the largest global brewer	**Anheuser Busch Companies Inc.:** the largest brewer in the U.S.	Beer market in China	High post-merger market share (no numbers specified in the announcement)	**Cleared with conditions:** Limitations of cross ownership and investment in other brewers
Coca-Cola & Huiyuan[43]	**Coca-Cola Company:** the world's largest soft drink company	**China Huiyuan Juice Group Limited:** China's largest juice maker	Chinese carbonated soft drink market and Chinese fruit juice market	(1) Coca-Cola could leverage its dominant position in the carbonated soft drink market into the fruit juice market; (2) Increased entry barriers given branding strength (3) Negatively affect the ability of small- and medium-sized enterprises to compete.	**Application denied**
Mitsubishi Rayon & Lucite[44]	**Mitsubishi Rayon:** Japanese manufacturer of methacrylate (MMA) and acrylonitrile (AN) complexes.	**Lucite:** a British and largest supplier of MMA, 24% of the global acrylic monomer market and 64% of the Chinese market.	Chinese MMA market	Post-merger MMA market share would be 64%, which is much higher than that of the largest rivals. Adverse "vertical impact" on the downstream market.	**Cleared with conditions:** Divestitures and limits on expansion
General Motors & Delphi[45]	**GM:** an American car manufacturer with a leading position in the global and Chinese car markets.	**Delphi:** an American manufacturer of automotive components. In China, exclusive supplier to some vehicle manufacturers.	Chinese vehicle market and the upstream automotive components market.	Vertical relationship in the upstream and downstream automotive markets. (1) Delphi is the exclusive supplier to many Chinese vehicle manufacturers, so the merged parties could raise rivals' costs (2) Information about GM's rivals in the possession of Delphi might be disclosed to GM; (3) Foreclosure of access to GM of other automotive component manufacturers.	**Cleared with conditions:** Behavioral, pricing, and non-discrimination commitments

[42] See MOFCOM Notice No. 95 (2008), available at http://tjtb.mofcom.gov.cn/aarticle/touzzn/t/200811/20081105906356.html (last visited on August 30, 2011).

[43] See MOFCOM Notice No. 22 (2009), available at http://fldj.mofcom.gov.cn/aarticle/ztxx/200903/20090306108494.html?946530605=171424798 and MOFCOM press release on March 18, 2009, available at http://www.mofcom.gov.cn/aarticle/ae/ai/200903/20090306108388.html (last visited on August 30, 2011).

[44] See MOFCOM Notice No. 28 (2009), available at http://file.mofcom.gov.cn/moffile/search/pages/detail.jsp?seqno=13425 (last visited on August 30, 2011).

[45] See MOFCOM Notice No. 76 (2009), available at http://file.mofcom.gov.cn/moffile/search/pages/detail.jsp?seqno=13953 (last visited on August 30, 2011).

Merger	Acquirer	Target	Market Definition	Anticompetitive Concern	Decision
Pfizer & Wyeth[46]	**Pfizer Inc.:** a US pharmaceutical company with global operations in the human health and animal health sector	**Wyeth Corporation:** US pharmaceutical company in the human and animal health sectors	Two drug markets in mainland China in human health and three drug markets in animal health sector	The merger might damage competition in one of the five relevant markets: the swine vaccine market which was already highly concentrated (high HHI); post-concentration market share would reach 49.4%	**Cleared with conditions:** Divest Pfizer's swine mycoplasma pneumonia vaccine business in mainland China.
Panasonic & Sanyo[47]	**Panasonic Corporation:** Japan-based group with global business, many consumer and industrial products, including batteries	**Sanyo Electric Co. Ltd. :** Japan-based group with global business, many consumer and industrial products including batteries	Three global markets: (1) Rechargeable lithium batteries, (2) Nickel-metal hydride batteries, and (3) Nickel-metal hydride car batteries.	(1) 61.6% post-merger market share; power to unilaterally increase price. (2) 46.3% post-merger market share; mature market with no potential entrants. (3) 77% post-merger market share; Panasonic's joint venture with Toyota Panasonic EV Energy Co. Ltd (PEVE), could harm competitors.	**Cleared with conditions:** (1) Sanyo to divest its rechargeable coin-shaped lithium batteries business (2) Either Panasonic or Sanyo to divest its nickel-metal hydride batteries (3) Panasonic to divest its nickel-metal hydride batteries for vehicles; Panasonic to reduce its stake in PEVE to 19%
Novartis & Alcon[48]	**Novartis:** a Switzerland- based pharmaceutical company	**Alcon:** a US (Texas)-based pharmaceutical company	Global and Chinese ophthalmological anti-infection product markets, and contact lens care product market.	(1) ophthalmological anti-infection: 55% post-merger global market share and 60% post-merger Chinese market share (2) Contact lens care product market: global market share as high as 60%, China market share 20%, but the largest player, Hydron Contact Lens Co., Ltd, is the sole distributor of Novartis' lens care product. Coordinated effects.	**Cleared with conditions:** Novartis shall not sell its ophthalmological anti-infection products in China within five years and shall terminate its distribution partnership with Hydron.

[46] See MOFCOM Notice No. 77 (2009), available at http://file.mofcom.gov.cn/moffile/search/pages/detail.jsp?seqno=13954 (last visited on August 30, 2011).

[47] See MOFCOM Notice No. 82 (2009), available at http://fldj.mofcom.gov.cn/aarticle/ztxx/200910/20091006593175.html (last visited on August 30, 2011).

[48] See MOFCOM Notice No. 53 (2010), available at http://file.mofcom.gov.cn/moffile/search/pages/detail.jsp?seqno=16653 (last visited on August 30, 2011).

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