

The Merger of Superior Propane and ICG Propane: A Case Study

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Introduction

The Competition Tribunal of Canada is expected to make a decision on the merger of Superior Propane and ICG Propane in early 2002. Superior Propane and ICG Propane are engaged in the retail sale and distribution of propane and the provision of related services. They have historically competed against each other in a number of overlapping geographic and product markets, and they are the only two companies that supply propane to end-users across Canada. In 1997, Superior had 130 and ICG had 110 branches and satellite locations across Canada. On December 7, 1998, Superior acquired all outstanding shares of ICG (the merger). The Commissioner of Competition brought an application before the Competition Tribunal pursuant to Section 92 of the Competition Act alleging that the merger would substantially prevent or lessen competition in Canada. The Competition Tribunal decided that the merger was justified because of efficiencies it produced, even though it created monopoly power and higher price. The Commissioner of Competition then appealed to the Federal Court of Canada on grounds that economic efficiency was not the sole criteria under the law. The Federal Court agreed and remanded to the Tribunal to consider the merger in light of a broader standard.

The Structure of Canadian Antitrust Institutions

In Canada the Commissioner of Competition is an appointed public official who works for the Bureau of Competition Policy and possesses responsibility for enforcing the Competition Act (the Act). The purpose and other important portions of the Act are located in Appendix 1. The Bureau only reviews mergers that have significant competition issues, which account for about 10% of all mergers that take place in Canada. During a three year period 39 out of 335 reviewed mergers required further attention but almost none proceeded to the Tribunal. The Bureau managed the mergers in various ways, which included requiring monitoring (19 of the mergers), restructuring the merger to alleviate anti-competitive issues (9), voluntary abandonment by the firms (7), and Tribunal consideration as solely a final alternative (4).

When the Bureau reviews a merger it assesses the impact of the merger on future competition. This includes evaluating the size of the market share and market concentration, and impediments to entry for new firms entering the market. Additionally, the Bureau must review the merger in light of certain qualitative factors outlined in Section 93 of the Act (see Appendix 1). Historically, even if the merger is estimated to have a negative impact on competition, the companies can appeal to the efficiency exception (or efficiency defense see Appendix 1, Section 92.1) if the firms can show that efficiencies gained (benefits) from the merger exceed the costs of the decrease in competition.

The Canadian Parliament created the Tribunal in 1986 with the enactment of the Competition Act. The Tribunal operates independently of any government department and consists of up to four judicial members, and up to eight lay members. The Tribunal consisted of one judicial member and two lay persons during the Superior merger hearing. The Tribunal does not have final authority and participants can appeal to the Federal Court of Canada for redetermination.

The Tribunal's Decision

The Tribunal found that the merger would substantially lessen competition in 66 of 74 local markets for the supply of propane. In 16 markets the merged entity would have a pure monopoly or near monopoly, with a market share ranging from 97% to 100%. In another 16 markets, where substantial market concentration already existed, the merger would remove healthy competition. The Tribunal found that the merger would lessen competition substantially in the coordination services offered to national account customers, leaving the merged entity as the only firm in Canada serving this market. National account customers have multiple business locations throughout the country, but use only one supplier for propane services.

Despite these concerns, the majority of the Tribunal found that the merger was saved from divestiture by application of the efficiencies defense found in the Competition Act (See Appendix1 for Section 92.1).

The Tribunal's interpretation of the clause, "effects of any prevention or lessening of competition that will result" considers economic efficiency as the only "effect" of the

merger. The Tribunal defines economic efficiency in traditional terms, which they label the “Total Surplus Standard”. “The Total Surplus Standard” employs the criteria for welfare normally used in economic analysis. The economic definition of societal welfare is the sum of the producer and consumer surplus. The consumer surplus is the amount consumers would pay rather than forego a good, minus what they actually pay.

Graphically, it is the area under a demand curve but above the price. The producer surplus is similar to economic profits and both are zero in perfectly competitive markets. Graphically, it is the area above the supply curve and below the price and is the amount that the producer would be willing to pay to produce at a given level rather than give up production. Sometimes it is called quasi-rent. In traditional economic analysis producer and consumer surplus are weighed evenly; a dollar transferred from the consumer to the producer does not imply loss but is treated as a welfare neutral transfer. The merger would raise prices but would lower costs. A merger is economically efficient then if the efficiencies created by the merger were greater than the loss of consumer surplus and offset, the merger’s price increase.

In Figure 1 below P_1 is the price before and P_2 the price after the merger. The income transfer (welfare neutral transfer), and the deadweight loss were consumer surplus before the merger. Assuming competition before the monopoly, there were no economic profits, just normal profits and therefore no producer surplus. After the merger, the producer surplus will be the efficiency gains plus the income transfer. The deadweight loss (DWL) and the income transfer are lost to consumers. Average costs fall (AC_1 to AC_2) because of the gains in efficiency from the merger and the company can raise price above average costs (to P_2) because of increased monopoly power within the market. Since the income transfer is a gain to producers and a loss to consumers economic analysis regards this as an offsetting transfer with no net welfare effect. The deadweight loss represents money lost to society because the monopolist can raise price above the supply curve (above average and marginal costs).

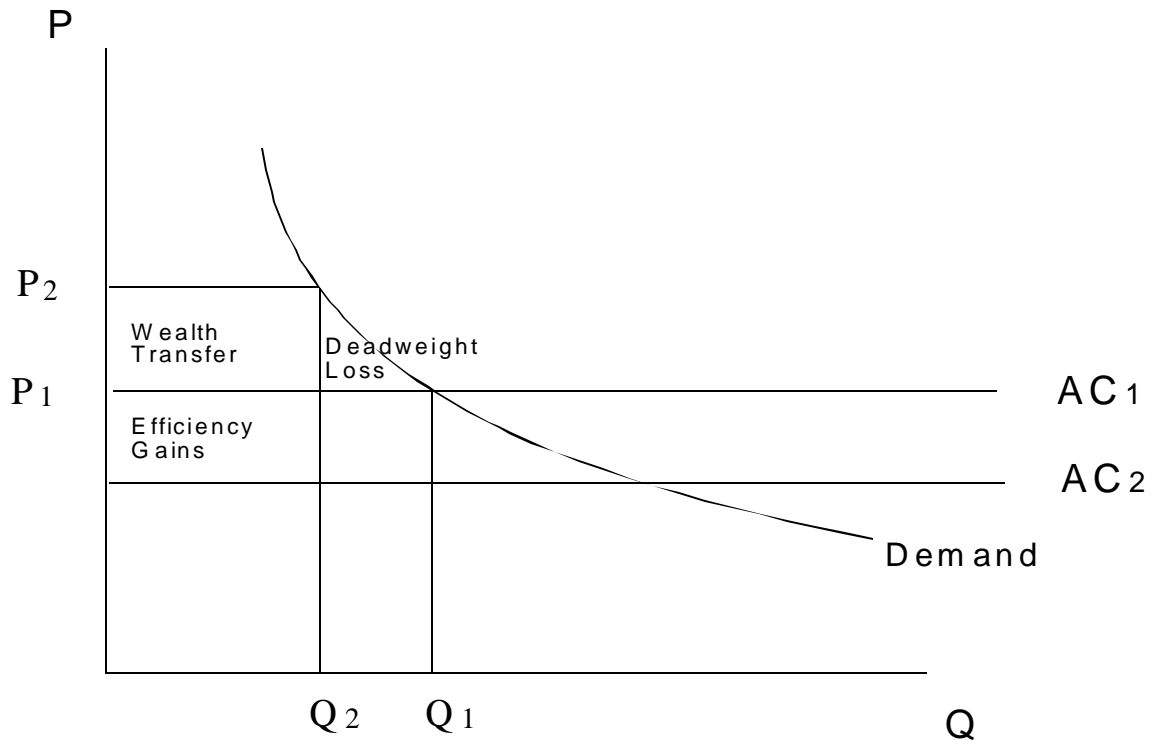


Figure 1 Effects of Monopoly Power

The Tribunal’s chosen measure, the “Total Surplus Standard,” is simply the difference between the efficiency gain and the deadweight loss. Superior Propane’s efficiency gains were estimated over a ten year period at \$29.2 million per year and the deadweight loss at less than \$3.0 million per year. Since the efficiency gains exceed the loss of consumer surplus, the merger is said to be efficient and beneficial to society. Because the Tribunal concluded that economic efficiency as the sum of producer and consumer surplus (the “Total Surplus Standard”) was the correct measure, the deadweight loss is the sole “effect” of the lessening of competition that must be balanced against the efficiency gains in operation. The Tribunal treated any other effects as irrelevant, including the size of the wealth transfer from consumers to Superior as a result of the higher than competitive market prices Superior was likely to charge for propane as a result of the merger. The estimate of the total wealth transfer from consumers to producers for the Superior Propane case is \$40.5 million per year, but this is effectively null under the Tribunal’s interpretation of “effects.”

The Commissioners Appeal

The Commissioner appealed the Tribunal's decision to dismiss its application for divestiture of the Superior Propane merger to the Federal Courts. The Commissioner disagreed with the Tribunal's interpretation of the Competition Act in three areas; the interpretation of the purpose clause (S 1.1), the definition of "effects" under subsection 96.1, and the adoption of the Total Surplus Standard under subsection 96.1 (see Appendix 1 for these sections). Generally, the Commissioner's appeal concerns the scope of the "efficiency defense." Under this defense, a merger must be permitted, even though it is likely to prevent or substantially lessen competition in a particular market, if the efficiency gains flowing from the merger are greater than, the *effects* of the lessening of competition. The Commissioner seeks to expand those effects.

The purpose clause requires that the Commissioner protect small and mid-sized companies from unequal competition and consumers from unfair prices and limited product choices (for more about propane consumers, see Appendix 2). The Commissioner sees these as separate criteria from economic efficiency. According to the Commissioner, the Tribunal did not protect consumers and smaller businesses from the anti-competitive effects of the monopoly because they considered economic efficiency and deadweight loss exclusively. The Commissioner argues that the Clause cannot be separated from the rest of the law and any interpretation must coincide with the scheme of the statute and the intent of Parliament.

The Tribunal is directed to allow a merger if the proposed merger "is likely to bring about gains in efficiency that will be greater than, and will offset, *the effects of any prevention or lessening of competition*" (S 96.1). The Commissioner argues that the "effects" are never clearly defined within the law and should be interpreted with respect to the Purpose Clause. Economic efficiency is not the only "effect" that prevents or decreases competition, and the commissioner argues that many other "effects" deserve consideration. The wealth transfer from consumers to producers results in an increased concentration of wealth in business and decreases a consumer's ability for equal footing in the marketplace. The monopoly increases price, which limits consumers' entitlement through law to competitive prices and diverse product choices.

The key issue raised by the Commissioner's appeal is whether the legal "effects" of an anti-competitive merger are limited to the loss of resources to the economy as a whole, economic efficiency, or whether they include a wider range of the effects of a substantial lessening of competition in the national economy.

Townley's Economic Defense

According to Dr. Peter G.C. Townley, the Commissioner's expert economist, in a situation where a merger causes the price of the good in question to rise, consumers lose and merging firms gain. The distinction between winners and losers is clear, and one would wish to assess relative income levels and impacts explicitly.

Townley states that before the Tribunal accepted the "Total Surplus Standard" it should have assessed the nature of the good in order for proper consideration of equity effects. Generally, the Total Surplus Standard leaves serious questions unanswered. The Total Surplus Standard does not measure any equity effects and moral sentiments of the general public are completely ignored. Price increases due to monopoly or taxes on goods that are inelastic in demand create smaller dead weight losses, but can create substantial inequity. Necessities or goods that lack close substitutes will exhibit inelastic demand (quantity demanded does not significantly vary with a price change). For goods with inelastic demand the wealth transfer effect and the harm to consumers is greatest. Townley notes that "if the good in question is regarded as a necessity, its demand will be price inelastic and a price-increasing merger will lead to a relatively small deadweight loss. However, it is precisely in this case that equity concerns are greatest." He notes that to disregard these effects does not accord with societies tax treatment of necessities. Governments "forgo an 'efficient' tax. . . (and) presumably they do so because such a tax would be perceived as inequitable. That is, relatively poor households spend proportionately more on necessities than relatively wealthy households. A tax on such goods would fall disproportionately on the poor, and thus be considered regressive." Propane, in the Canadian market context, exhibits qualities of both a necessity and a good without close substitutes.

To see the effects of elasticity consider Graph 2. D_1 is very inelastic (nearly vertical) and when price increases from P_1 to P_2 the quantity demanded does not change significantly. Compare this with D_2 , which is nearly perfectly elastic. When price rises to

P_2 the quantity demanded decreases significantly to Q_3 . The difference in the quantity demanded is $Q_3 - Q_2$. A monopolist is unable to increase price significantly with an elastic demand curve, because quantity demanded decreases in a greater proportion than the price increase. Therefore, with an inelastic demand curve, producers ability to raise price increases and the deadweight loss will be relatively small because consumers are willing to pay higher prices for the good. If the “Total Surplus Standard” is utilized, a monopoly may be accepted even if it has only slight efficiency gains, a negligible deadweight loss because of inelastic demand, and a large transfer of consumer surplus to producer surplus.

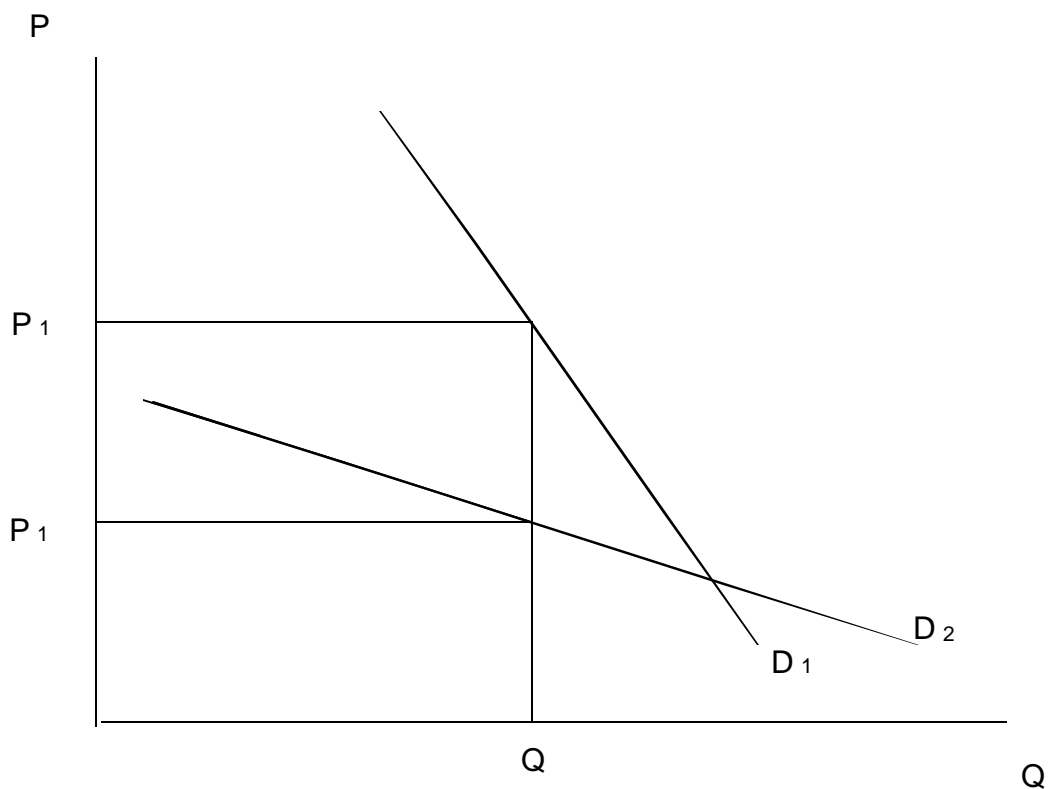


Figure 2 Graphical Depiction of Elastic and Inelastic Demand

Townley explains four different standards for evaluating the effects of monopoly power. The first is the Total Surplus Standard, which was outlined earlier as simply the efficiency gains minus the deadweight loss. The second standard, the Price Standard, attributes zero weight to firms’ efficiency gains. A merger would pass the Price Standard only if it improves the welfare of all consumers. A merger may accomplish this if the

downward pressure on price through decreased marginal costs outweighs the upward pressure on price from the increase in market power. Any merger that causes an increase in price will fail the Price Standard.

The next methodology Townley presents called the Consumer Surplus Standard, compares the loss of consumer surplus with the efficiency gains to the producer. The standard assigns a weight of zero to producer gains due to their ability to increase price as a result of their monopoly power. This method makes the value judgment that exploitation of monopoly power is bad, but resource savings are good. If the loss of consumer surplus is greater than the efficiency gains then the merger will fail the Consumer Surplus Standard. The Consumer Surplus Standard is measured as follows:

$$(\text{Producer Surplus} + \text{Deadweight Loss}) = \text{Loss of Consumer Surplus (LCS)}$$

compared with

Efficiency Gains (E)

if $LCS > E$ then the merger fails the Consumer Surplus Standard

if $LCS < E$ then the merger passes the Consumer Surplus Standard

The final method Townley introduces involves measuring a balanced weight that will just balance consumer losses and producer gains. The decision-maker would then decide whether the balancing weight is higher or lower than what is desired. We can assign a weight of 1 to producers and set total surplus equal to zero in order to solve the equation. Solve for w and w gives the additional weight consumer's would need to balance their losses with the producer's gains. The decision-maker(s) would make a value judgment concerning whether consumer's dollars should be weighed $w\%$ more than producer's dollars.

In order to assess the effects of a merger on society, Townley recommends the following steps:

1. Subject the proposed merger to the Price Standard. If it were to satisfy this test, merging firms would be made better off and consumers, at the very least, would be made no worse off if the merger were to proceed. If a merger failed to satisfy the Price Standard, a second step would be required.
2. Assess the merger with the Total Surplus Standard. There would be little reason to proceed further in the consideration of a particular merger if it failed to satisfy this

test. If the proposed merger satisfied the Total Surplus Standard, a third step would be to consider the distributional impacts of the merger.

3. Use the Consumer Surplus Standard to evaluate the merger. The Consumer Surplus Standard gives a zero weight to any gains to the producer because of a price increase. Compare the efficiency gains with the loss to consumer surplus (producer surplus + deadweight loss).
4. Calculate a set of balancing weights that just balances gains and losses. One can assign a weight of 1 to producer's gains and a weight of w to consumer's losses. Here, the value of w is the one that just causes the weighted change in total surplus to be equal to zero. This is the solution to:

$$TS = 0 = (1)(\text{Producer Surplus}) + (1)(\text{Efficiency Gains}) - (w)(\text{Loss of Consumer Surplus})$$

Measuring the Superior Merger according to the standards.

Price Standard	Superior Propane is expected to raise prices by 8% on average because of their increase in monopoly power so the merger fails the price standard.
Total Surplus Standard	The efficiency gains of \$29.2 million outweigh the deadweight loss of \$3.0 million so the merger passes the total surplus standard.
Consumer Surplus Standard	Compare the loss of consumer surplus (the producer surplus plus the deadweight loss) with the efficiency gains. The producer surplus equals \$40.5 million plus the deadweight loss of \$3 million equals a total of \$43.5 million. The merger fails the consumer surplus standard because the efficiency gains are only \$29.2 million.
Balanced Weights Standard	The balanced weight equation is set equal to zero and reads as follows. $TS = 0 = (1)(40.5\text{million}) + (1)(29.2\text{million}) - ((w)(40.5\text{million} + 3\text{million}))$ so $w = 1.602$ Decision-makers would then decide whether the weight attributed to consumers is greater than the weight attributed to producers by a factor greater than 60.2%.

The Federal Courts Decision

The Federal Court of Appeal found that the majority of the Tribunal had erred in law by limiting the considered effects to changes in producer and consumer surplus, and by failing to ensure that all of the objectives of the Competition Act, and the particular

circumstances of each merger, were given consideration in the balancing exercise mandated by the act (see the balancing exercise S.96.1. in Appendix 1).

The Federal Court of Appeal directed that other anticompetitive effects be included in the interpretation of the word “effects.” The Tribunal should consider all of the objectives in Section 1.1 of the Competition Act when interpreting the word “effects,” but determining the exact “effects” will require the Tribunal to exercise its judgment.

The Tribunal is required to use either the Balanced Weights Standard (as advocated by Townley) or a similar method which incorporates the additional “effects” of the merger, instead of the efficiencies defense. Using this methodology, the Tribunal will determine the anti-competitive effects of a merger by taking into account a range of factors, but will not assign to each a fixed a priori weight. The factors include: the deadweight loss; the wealth transfer from consumers to producers resulting from the increase in prices through the exercise of market power; the loss of product choices and services currently associated with the product; the impact of the merger on small to medium sized businesses; and the prevention of competition and the creation of a monopoly or near monopoly in some or all of the relevant markets.

7.0 The United States Practice

The United States essentially applies the price standard to mergers. The Federal Trade Commission and Department of Justice are unlikely to allow a merger that increases prices by more than 5%. That is the Canadian merger would be unlikely to prevail if it was taking place in the United States because the expected price increase is 8%. But what is the justification for such a policy?¹ The United States merger guidelines language on these points is talmudic and the issue is not openly and directly addressed. The Federal Trade Commission and the Department of Justice issued Horizontal Merger Guidelines in 1992. The guidelines merely state that “sound merger enforcement must prevent anticompetitive mergers yet avoid deterring the larger universe of procompetitive or competitively neutral mergers.” In addition, Professor Robert Lande (1982) has argued that a price standard is the proper one on the bases of the legislative intent in

¹ Price increases above 10% are almost certainly not allowed and the 8% estimated for the propane merger would be unlikely to be allowed.

crafting the major antitrust laws. Lande's "wealth transfer" thesis presents the argument that legislative history of antitrust law demonstrates that Congress's primary concern is with the protection of consumers. There is no decision in U.S. federal courts that directly addresses this issue.

7.0 The General Issue

The major issue this case raises is how one makes a decision when economic efficiency conflicts with equity. The Commissioner of Competition is questioning the legality of a merger between two propane delivery companies because of concerns that equity will be jeopardized. The case is currently in Canadian competition court and a decision is expected in early 2002 regarding the fate of the merger. A comparatively small deadweight loss due to the inelastic demand for propane, a large wealth transfer from consumers to producers due to the price increase, and substantial efficiency gains from the streamlining of many company processes characterize the impacts of the merger.

It is easy to say that in a public policy decision, equity should be considered. But this begs the question of how it should be considered. How much weight should it have. Should it receive infinite weight as Rawls suggests in certain cases (Rawls,)? Should the weight different people receive be say inversely related to income as others have suggested? We ask here a more narrow question, is there a justification for including equity consistent with the logic of economic efficiency? If so can this justification inform us about how the equity effects should be included?

8.0 Is There An Economic Justification for a Price Standard

The Kaldor-Hicks Standard

There is no justification for a price standard or a balancing standard in the standard economic welfare criteria, the Kaldor-Hicks criteria. The KH standard is essentially the Total Surplus Standard. This criteria states that a project is desirable when the winners could, hypothetically and in principle, compensate the losers. The test is also known as the the Potential Compensation Test (PCT) efficiency standard. To understand this standard it is useful to visit its history.

The KH criteria arose out of discussions among prominent British economists during the late 1930's.² Before this time it was generally assumed that each individual had an "equal capacity for enjoyment" and that gains and losses among different individuals could be directly compared (Mishan, 1981, pp.120-121; Hammond, 1985, p. 406). Robbins (1932, 1938), disturbed this view by arguing that interpersonal comparisons of utility were unscientific. Economists accepted this and attempted to develop a welfare measure that would avoid interpersonal comparisons and which was more broadly applicable than Pareto efficiency. Kaldor (1939, pp. 549-550) acknowledged Robbins' (1938, p. 640) point about the inability to make interpersonal utility comparisons on any scientific basis, but suggested it could be made irrelevant. He suggested that where a policy led to an increase in aggregate real income;

. . .the economist's case for the policy is quite unaffected by the question of the comparability of individual satisfaction, since in all such cases it is possible to make everybody better off than before, or at any rate to make some people better off without making anybody worse off.

Kaldor goes on to note (1939, p. 550) that whether such compensation should take place "is a political question on which the economist, qua economist, could hardly pronounce an opinion."

Thus, it came to be thought that including considerations of the income distribution or of compensation would involve interpersonal comparisons, that such comparisons could be avoided by excluding considerations of compensation or of the income distribution, and that the measure of efficiency could be made more scientific. The technical assumption that was made was that the marginal utility of money was one across all people. This assumption was thought to be neutral and to avoid interpersonal comparisons by treating all equally.

9.0 Moral Sentiments and the KH Standard

Traditionally the KH criteria are, arguably, thought not to include moral sentiments. By moral sentiments we mean those involving concern for other beings. The focus of debate has been those moral sentiments that involve concern for humans. These sentiments include immoral sentiments as when one wishes harm to others. One may

² These are: Robbins, Hicks, Kaldor, and Harrod, all writing in the *Economic Journal*.

care about others as a result of kinship, empathy, envy or hatred or as a matter of justice. Charity is an expression of moral sentiment. One may care about others from their perspective (one cares about their utility function) and this is called non-paternal altruism. One may care about others from one's own perspective as when a parent requires a child to eat spinach when the child would rather not. This is paternalistic altruism.

10.0 Does the Inclusion of Moral Sentiments Violate the Economic Condition of Treating All Equally?

In economics it has been the case that treating all equally involves giving each person preferences equal weight. More technically, this has meant the assumption of equal marginal utilities of income so that an additional dollar of income has the same value to all. Historically the acceptance of this assumption has been thought to mean that economic efficiency was neutral with respect to changes in income distributions or money transfers. This is, however, not the case. The assumption does not obviate concern for others, nor the economic expression of this concern. One need only ask oneself if there are situations in which one would be willing to pay to affect some degree of compensation for the losses of others. Since the answer for some will be yes, then the enactment of compensation is itself an economic good. There will be a WTP or WTA for the purchase of this good. These WTP and WTA measures for gains and losses can be treated consistently with an equal marginal utility of income by assigning them a weight of one across different individuals just as is done for other goods. Thus, to include compensation or changes in income distribution as economic goods requires no interpersonal comparisons, except the requirement, already a part of KH, to treat the value of a benefit or cost worth a dollar the same no matter who receives it.

The recognition that KH need not lead to a rejection of equity effects has led Harberger (1978) and Zerbe (198x) to suggest a measure for them. The basic notion is that one should not give more weight to losses or gains of any group than the costs of compensating or transferring money to them by whatever is the most efficient alternative method. Pick a specific transaction cost, say 20%, and ask the students if the merger would be justified under this standard. The case notes that the transfer loss is about 40

million per year, the deadweight loss is 3 million and the efficiency gains are 29 million. Assume that the deadweight loss is borne by consumers so that their total loss is 40 million plus 3 million or 43 million. The benefit-cost calculation is then \$40 million loss to consumers offset by a \$40 million gain to the producers minus the 3 million deadweight loss. Add to this figure the 29 million in efficiency gains minus the administrative costs of hypothetically compensating consumers of \$8.6 million. The result is \$18.4 million per year; the merger is still justified. This can be put in the form of changes in consumer and producer surpluses as follows.

Table Three: Accounting for Equity

Change in Welfare	Millions of dollars per year
Change in Consumer Surplus	-\$43
Change in Producer Surplus	+\$69
Transfer Compensation Cost	-\$8.6
Total	\$18.4

It would appear that the merger is so efficient that it remains justified by this modification or extension of KH.

The Inclusion of Moral Sentiments

We have assumed that people are unwilling to pay more to compensate those harmed than the cost of the compensating them by the cheapest alternative means. The costs of alternative compensation may, however, be very high. This cost is not limited to the waste inherent in transfers were a transfer mechanism in place but includes the cost of creating such a mechanism where it is not in place. Suppose that a project moves income from the poorest members of society to the richest by an unattractive process. Many members of society neither rich nor poor and not directly affected by these transfers find them unjust and would be willing to pay to prevent them. Given there is no mechanism to compensate those threatened unjustly, the WTP to prevent the transfers may be quite large so that the project imposes costs on society much larger than the traditional dead weight loss. So one must ask in the case of the propane merger if compensation of users of propane is in fact unlikely, what is the WTP of those who see the effects of the merger as unjust?

This of course raises the question of whether or not compensation is feasible? Clearly by definition of KH efficiency they could do this and the company would still have gains *if the administrative costs of transfer are sufficiently low*. But no one has proposed that compensation of consumers actually take place.

This then raises the issue of the relevance of mere hypothetical compensation. Zerbe (2001a) has developed a modification of the traditional Kaldor-Hicks or Potential Compensation Standard. He points out that not only are equity effects ignored under the traditional standard but that moral sentiments are, arguably, neglected as well (Milgrom 1993). Accordingly, he suggests another standard, KHZ. Under KHZ the willingness to pay for equity is included as with any other good.³ He argues that projects with compensation produce different outcomes from those without compensation. This might be an idea worth exploring in class. Consider the following example from Zerbe (2001b).

The standard KH benefit-cost analysis would direct the analyst to choose the project without mitigation. But this result typically arises because the analysis has not taken into account the moral sentiments of those who care about the equity effects but are not otherwise affected. We might give standing to these sentiments of justice in Table 5 below by considering the moral objection that others have to the imposition of costs onto the poor. This moral objection is a required inclusion of KHZ. This is shown in Table 5 where the WTP is by members of the community at large who do not live in the poorer neighborhood. The benefits are the net costs avoided by not building in the best alternative site. Compensation is just a transfer and is ignored except for its effect on moral sentiments.

Table 2. Benefits and Costs When Moral Sentiments are Included

The project with compensation will be superior as long as the transactions costs of carrying out compensation are less than the value of the redistribution to others, i.e. are less than X.

³ The assumption is that all goods for which there is a WTP are economic goods and should be included. Equity is such a good. KHZ also includes transactions costs which KH does not and KHZ does not require that the potential compensation be satisfied. Instead he suggests that a project is desirable when the benefits exceed the costs where equity is one of the goods that enters as a benefit or a cost. This will satisfy the potential compensation test except where there is non-paternalistic altruism (Zerbe 2001b).

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The major issue this case raises is how one makes a decision when economic efficiency conflicts with equity. The Commissioner of Competition is questioning the legality of a merger between two propane delivery companies because of concerns that equity will be jeopardized. The case is currently in Canadian competition court and a decision is expected in October 2001 regarding the fate of the merger. A comparatively small deadweight loss due to the inelastic demand for propane, a large wealth transfer

from consumers to producers due to the price increase, and substantial efficiency gains from the streamlining of many company processes characterize the impacts of the merger.

The Canadian propane market is characterized by a fairly inelastic demand curve. The merger looks less harmful because there is a small deadweight loss. In this case, the small deadweight loss is caused by the nature of the good. Propane has characteristics of a necessity good and a good without close substitutes. A significant price increase is problematic if the good is a necessity and students may want to discuss this further. Additional questions assess the students' economic knowledge of monopoly power and its effects.

A Puzzle

The merger fails the efficiency (total surplus) standard. In practical analysis of benefit-cost issues in the United States, the price standard is used to determine an outcome. The Federal Trade Commission and Department of Justice are unlikely to allow a merger that increases prices by more than 5%. That is the Canadian merger would be unlikely to prevail if it was taking place in the United States because the expected price increase is more than 5%. But what is the justification for such a policy?⁴ The United States merger guidelines language on these points is talmudic and the issue is not openly and directly addressed. It is recognized however, that the justification for such a standard lies in the law and not in economic analysis. There is no decision in U.S. federal courts that directly addresses this issue.

The Federal Trade Commission and the Department of Justice issued Horizontal Merger Guidelines in 1992. The guidelines merely state that “sound merger enforcement

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must prevent anticompetitive mergers yet avoid deterring the larger universe of procompetitive or competitively neutral mergers.” In addition, Professor Robert Lande (1982) has argued that a price standard is the proper one on the bases of the legislative intent in crafting the major antitrust laws. Lande’s “wealth transfer” thesis presents the argument that legislative history of antitrust law demonstrates that Congress’s primary concern is with the protection of consumers.

The puzzle is, is there any justification for this stance?

Students may perceive this case simply as the interest of monopoly corporations versus the public interest and the answer from a public policy perspective is unambiguous: protect the public interest. But who are the firms? They may also be a part of the public we wish to protect. The issue surrounding incidence of the price increase becomes important. Which individuals will actually gain? People who could gain include the shareholders, the company management, and the company workers. This issue could be used to further explore the difference between the perceived and actual bearers of the burden (incidence) of price increases.

The equity issue leads to the Potential Compensation Standard. That winners could, hypothetically and in principle, compensate the losers has been the traditional justification for the Kaldor-Hicks criteria (henceforth KH) also known as the Potential Compensation Standard) efficiency standard. This standard is essentially the same as the Total Surplus Standard. This raises the issue of whether or not the government could compensate or require the companies to compensate the consumers for their losses. They could do this and the company would still have gains *if the administrative costs of transfer are sufficiently low*. But no one has proposed that compensation of consumers actually take place.

This then raises the issue of the relevance of mere hypothetical compensation. Zerbe (2001a) has developed a modification of the traditional Kaldor-Hicks or Potential Compensation Standard. He points out that not only are equity effects ignored under the

traditional standard but that moral sentiments are, arguably, neglected as well (Milgrom 1993). Accordingly, he suggests another standard, KHZ. Under KHZ the willingness to pay for equity is included as with any other good.⁵ He argues that projects with compensation produce different outcomes from those without compensation. This might be an idea worth exploring in class. Consider the following example from Zerbe (2001b).

The Municipal Incinerator

Here, we are concerned with the analysis of two projects, which are identical except that one provides compensation in the form of mitigation and the other does not. Consider a benefit-cost analysis of the efficient location of a municipal incinerator. The decision to locate the incinerator in the poorest neighborhood on the grounds of economic efficiency will typically raise issues of environmental justice. It may then be said that KH leads to an unjust result. A typical simplified analysis may look as follows.

Table 1. Standard Benefit-Cost Analysis

	LOCATION IN POORER NEIGHBORHOOD WITH NO MITIGATION OF HARM TO RESIDENTS	LOCATION A (POORER NEIGHBORHOOD WITHOUT HARM TO RESIDENTS
Cost Of Land	\$500,000	\$500,000
Present Value Of Operating Costs	\$100,000	\$100,000
Costs Of Incinerator	\$1,000,000	\$1,000,000
Costs from Environmental	\$200,000	0

⁵ The assumption is that all goods for which there is a WTP are economic goods and should be included. Equity is such a good. KHZ also includes transactions costs which KH does not and KHZ does not require that the potential compensation be satisfied. Instead he suggests that a project is desirable when the benefits exceed the costs where equity is one of the goods that enters as a benefit or a cost. This will satisfy the potential compensation test except where there is non-paternalistic altruism (Zerbe 2001b).

Health Damage to Poorer Residents		
Costs of Preventing Environmental Health Damage	0	\$200,001
Benefits (Savings From Not Using Other More Expensive Locations)	\$2,000,000	\$2,000,000
Total Benefits	\$2,000,000	\$2,000,000
Total Costs	\$1,800,000	\$1,800,001
Benefits – Costs	\$200,000	\$199,999

The standard KH benefit-cost analysis would direct the analyst to choose the project without mitigation. But this result typically arises because the analysis has not taken into account the moral sentiments of those who care about the equity effects but are not otherwise affected. We might give standing to these sentiments of justice in Table 5 below by considering the moral objection that others have to the imposition of costs onto the poor. This moral objection is a required inclusion of KHZ. This is shown in Table 5 where the WTP is by members of the community at large who do not live in the poorer neighborhood. The benefits are the net costs avoided by not building in the best alternative site. Compensation is just a transfer and is ignored except for its effect on moral sentiments.

Table 2. Benefits and Costs When Moral Sentiments are Included

	TRADITIONAL ANALYSIS	KHZ ANALYSIS
	LOCATION IN THE POORER	LOCATION IN THE POORER

	NEIGHBORHOOD WITH NO COMPENSATION	NEIGHBORHOOD WITH COMPENSATION
Cost Of Land	\$500,000	\$500,000
Present Value Of Operating Costs	\$100,000	\$100,000
Costs Of Incinerator	\$1,000,000	\$1,000,000
Environmental Health Damage	\$200,000	\$200,000
Moral Harm to Current Generation	X	0
Benefits (Net Costs Avoided From Not Using Best Alternative Site	\$2,000,000	\$2,000,000
Total Benefits	\$2,000,000	\$2,000,000
Total Costs	\$1,800,000 +X	\$1,800,000
Benefits – Costs	\$200,000 -X	\$200,000

The project with compensation will be superior as long as the transactions costs of carrying out compensation are less than the value of the redistribution to others, i.e. are less than X. As long as others (those not compensated) care sufficiently about the compensation, that is as long as they care sufficiently about environmental justice, then the project with compensation is superior. Since these sentiments about equity are part of KHZ, they should in principle be taken into account. Hence under KHZ a project to locate the incinerator in a poorer neighborhood without compensation of those residents who will suffer is different from the same physical project when the residents are to be compensated. That is, under KHZ but not under KH, a project that involves compensation can be different from one that does not.

This approach leads to the adoption of some standard such as suggested by Harberger (1978). The basic notion is that one should not give more weight to losses or gains of any group than the costs of compensating or transferring money to them by whatever is the most efficient alternative method. Pick a specific transaction cost, say 20%, and ask the students if the merger would be justified under this standard. The case notes that the transfer loss is about 40 million per year, the deadweight loss is 3 million and the efficiency gains are 29 million. Assume that the deadweight loss is borne by consumers so that their total loss is 40 million plus 3 million or 43 million. The benefit-cost calculation is then \$40 million loss to consumers offset by a \$40 million gain to the producers minus the 3 million deadweight loss. Add to this figure the 29 million in efficiency gains minus the administrative costs of hypothetically compensating consumers of \$8.6 million. The result is \$18.4 million per year; the merger is still justified. This can be put in the form of changes in consumer and producer surpluses as follows.

Table Three: Accounting for Equity

Change in Welfare	Millions of dollars per year
Change in Consumer Surplus	-\$43
Change in Producer Surplus	+\$69
Transfer Compensation Cost	-\$8.6
Total	\$18.4

The issue now becomes can such an analysis be used to justify some standard such as the price standard in which the test of a merger is whether or not it is expected to raise prices? Under KHZ the justification of such a standard would depend on locating some uncounted values such as the WTP of the general population, including those not directly affected by the merger, to support such a rule, either as a type of altruism or as enlightened self interest.

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Appendix 1 – Important Excerpts from the Competition Act

The Purpose Clause

1.1. The purpose of this Act is to maintain and encourage competition in Canada in order to promote the efficiency and adaptability of the Canadian economy, in order to expand opportunities for Canadian participation in world markets while at the same time recognizing the role of foreign competition in Canada, in order to ensure that small and medium-sized enterprises have an equitable opportunity to participate in the Canadian economy and in order to provide consumers with competitive prices and product choices.

Section 92.1

92. (1) Where, on application by the Commissioner, the Tribunal finds that a merger or proposed merger prevents or lessens, or is likely to prevent or lessen, competition substantially

(a) in a trade, industry or profession,

(b) among the sources from which a trade, industry or profession obtains a product,

(c) among the outlets through which a trade, industry or profession disposes of a product,

or

(e) in the case of a completed merger, order any party to the merger or any other person

(i) to dissolve the merger in such manner as the Tribunal directs,

(ii) to dispose of assets or shares designated by the Tribunal in such manner as the

Tribunal directs, or

(2) For the purpose of this section, the Tribunal shall not find that a merger or proposed merger prevents or lessens, or is likely to prevent or lessen, competition substantially solely on the basis of evidence of concentration or market share.

R.S., 1985, c. 19 (2nd Supp.), s. 45; 1999, c. 2, s. 37.

Section 93

93. In determining, for the purpose of section 92, whether or not a merger or proposed merger prevents or lessens, or is likely to prevent or lessen, competition substantially, the Tribunal may have regard to the following factors:

(a) the extent to which foreign products or foreign competitors provide or are likely to provide effective competition to the businesses of the parties to the merger or proposed merger;

(b) whether the business, or a part of the business, of a party to the merger or proposed merger has failed or is likely to fail;

(c) the extent to which acceptable substitutes for products supplied by the parties to the merger or proposed merger are or are likely to be available;

(d) any barriers to entry into a market, including

(i) tariff and non-tariff barriers to international trade,

(ii) interprovincial barriers to trade, and

(iii) regulatory control over entry,

and any effect of the merger or proposed merger on such barriers;

(e) the extent to which effective competition remains or would remain in a market that is or would be affected by the merger or proposed merger;

- (f) any likelihood that the merger or proposed merger will or would result in the removal of a vigorous and effective competitor;
- (g) the nature and extent of change and innovation in a relevant market; and
- (h) any other factor that is relevant to competition in a market that is or would be affected by the merger or proposed merger.

R.S., 1985, c. 19 (2nd Supp.), s. 45.

The Efficiencies Defense

96. (1) The Tribunal shall not make an order under section 92 if it finds that the merger or proposed merger in respect of which the application is made has brought about or is likely to bring about gains in efficiency that will be greater than, and will offset, the effects of any prevention or lessening of competition that will result or is likely to result from the merger or proposed merger and that the gains in efficiency would not likely be attained if the order were made.

(2) In considering whether a merger or proposed merger is likely to bring about gains in efficiency described in subsection (1), the Tribunal shall consider whether such gains will result in (a) a significant increase in the real value of exports; or (b) a significant substitution of domestic products for imported products.