THE CURIOUS CASE OF
HORNE v. DEPARTMENT OF
AGRICULTURE: GOOD LAW, BAD
ECONOMICS?

Dean Lueck*

ABSTRACT: This paper uses economics to examine the facts and
ruling in the recent case Horne v. Department of Agriculture. The
paper argues that the Raisin Administrative Committee (RAC) is
best viewed as a government-enforced cartel that has raised the
domestic prices of raisins since its inception just after World War II.
The plaintiff Horne is best viewed as a cartel defector who benefited
from the supply restriction of the RAC and thus was most likely

* Department of Economics and the Ostrom Workshop, Indiana University,
Bloomington, IN. dllueck@indiana.edu. In February of 2015, I was asked by a team of
lawyers (including Professor Michael McConnell) to prepare an amicus brief with a
group of economists in support of Horne. After preliminary work, the economics
group chose not to write such a brief. From that process I have benefited from
discussion with Jeff Lafrance and Joe Balatgos. I have also benefited from
participants in the conference “Horne: Property and Prohibitions,” at New York
University School of Law on February 26, 2016, and from discussions with plaintiff’s
counsel Brian Leighton.

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compensated for the taking of his raisins by the higher prices resulting from the RAC. The government in defending the RAC chose not to stress this point, perhaps because there is little political support for such agricultural marketing orders today. The Court’s decision reiterated the rule that personal as well as real property must be compensated if taken by the State. This decision is unlikely to have much impact on state eminent domain actions which are overwhelmingly involved with real property for the construction of roads, schools, and so on. The rule might, however, limit the ways in which the State can enforce cartels, and in this regard the ruling would be efficiency-enhancing.

INTRODUCTION

In Horne v. Department of Agriculture the U.S. Supreme Court ruled that the federal government was guilty of taking of private property without compensation when the Raisin Administrative Committee (RAC) ordered raisin grower Marvin Horne to surrender a portion of his crop to the National Raisin Reserve.1 As a result of this ruling the RAC is no longer able to require growers to contribute to the Raisin Reserve.2 The case was immediately hailed as a “victory for private property” against the power of the State.3 The plaintiff’s lead attorney was a well-known conservative law

1 Horne v. U.S. Dep’t of Agric., 135 S. Ct. 2419 (2015). This case was the second heard on this issue by the Supreme Court. The first, Horne v. Dept. of Agriculture, 133 S. Ct. 2053 (2013) [hereinafter Horne I] was a 9-0 decision in which the Court simply held that the Ninth Circuit had jurisdiction to consider the case. The Ninth Circuit in Horne v. USDA, 750 F.3d 1128 (9th Cir. 2014), held that there was no taking because raisins were personal, not real property, which led to the second Supreme Court case.
professor (Michael McConnell); and several conservative groups (e.g., Cato Institute, Mountain States Legal Foundation) wrote briefs in support of the plaintiff.

The Court was asked by the plaintiff to answer three questions: (1) Does the Fifth Amendment apply only to real property and not personal property (e.g., raisins)?, (2) Can the government avoid the compensation requirement by reserving to the property owner a contingent portion of the value of the property?, and (3) Does a government mandate to relinquish property as a condition to engage in commerce imply a per se taking? Chief Justice Roberts wrote the majority opinion (joined in full by Alito, Kennedy, Scalia and Thomas; and in part by Breyer, Ginsberg, and Kagan) ruling that there is no distinction between real and personal property (so raisins count as property); that the government cannot avoid paying compensation by reserving a contingent portion of the property; and that the mandate to relinquish property is a per se taking which must be compensated. Justice Thomas, though concurring in full, also criticized the idea that there was a public use (as required by the Fifth Amendment) for the taken property. Justice Breyer (joined by Ginsberg and Kagan) concurred with parts I and II but dissented from part III, noting that the Hornes needed to show they were not compensated via higher prices and that “[t]he marketing order may afford just compensation for the taking of the raisins that it imposes.” Justice Sotomayor dissented, basically arguing that the RAC rules are a regulatory taking and thus not a taking worthy of compensation per se.

I use economics to deconstruct the decision in the case and the facts surrounding the government regulation of the raisin market. This case is obviously about the economics issues surrounding cartels created under federal law and enforced by the government,

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4 See Horne, 135 S. Ct. at 2425-2430.
5 Horne, 135 S. Ct. at 2433 (Breyer, J., concurring in part and dissenting in part).
yet the majority opinion, the concurrences and dissents contain nearly no economic reasoning. The economic issues in *Horne* concern the extent to which Horne and other raisin producers are compensated, through increased profits, for their mandatory contributions to the National Raisin Reserve (NRR). I argue that the Court overlooked the possibility that the plaintiff was compensated by the monopoly profits generated by the actions of the RAC, but that the ruling itself assisted in breaking down a government program that transferred economic surplus from consumers to a small group of raisin growers and reduced aggregate wealth by limiting trade. In this sense, the decision in *Horne* can be said to be bad economics and good law.

I. **A Brief History of the California Raisin Industry**

Raisins are dried grapes. They are comprised mostly of sugar (fructose and glucose), are a so-called “healthy snack,” and can cause renal failure in dogs. They are produced around the world but in the U.S. they are produced solely in San Joaquin Valley of California. Table 1 shows some key dates in raisin and RAC history.

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6 See *Horne*, 135 S. Ct. 2419. A search indicates no entries for the words “cartel,” “monopoly,” or “competition.” The terms “markets” and “regulation”, however, are commonplace.

7 I make no claim as to whether the legal reasoning is sound or not.

### Table 1: Timeline of Horne v. USDA

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1937</td>
<td>Agricultural Marketing Order Act of 1937.</td>
<td>Established federal marketing orders for specific agricultural products including raisins.</td>
</tr>
<tr>
<td>1949</td>
<td>Marketing Order 989 put into effect.</td>
<td>Raisin Administrative Committee (RAC) formed, comprised of growers, handlers and other industry members.</td>
</tr>
<tr>
<td>1969</td>
<td>Horne starts his Raisin Valley Farm.</td>
<td></td>
</tr>
<tr>
<td>2001-2002</td>
<td>Horne reorganized his business by vertically integrating into handling for his own raisins and for other who leased his equipment.</td>
<td>The marketing order specified that handlers were to provide raisins to the raisin reserve so by doing his own handling Horne sought to avoid compliance with the RAC reserve rules.</td>
</tr>
<tr>
<td>2002</td>
<td>Horne refuses to allocate raisins for the National Raisin Reserve as required by the RAC.</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td><em>Horne v. Dep’t of Agriculture I</em></td>
<td>Court sent the case back to the Ninth Circuit.</td>
</tr>
<tr>
<td>2014</td>
<td>Sun-Maid petitions USDA to abolishing the RAC and NRR and the marketing order</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td><em>Horne v. Dep’t of Agriculture II</em></td>
<td>Court rule that the RAC’s requirement to put raisins into the NRR was a per se taking.</td>
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</tbody>
</table>
A. CALIFORNIA RAISINS BEFORE THE NEW DEAL

Raisins were first produced in the late 19th century in California, where Spaniards and Mexicans had introduced grapes. In the 1870s William Thompson introduced to California a variety of the sultana grape, which became known as the Thompson Seedless grape. It is the primary grape used for California raisins and is also a common table grape. Armenian immigrants, with experience in raisin production, moved to California in the late 19th century, settled in the San Joaquin Valley (Fresno County) and established the Valley as the center of California raisin production. Currently in the U.S. there are no raisins grown outside of the central San Joaquin Valley and just 3,000 farmers produce them on roughly 200,000 acres within 60 miles of the city of Fresno.

B. RISE OF THE MACHINE: THE RAC AND THE NRR

The Agricultural Marketing Agreement Act of 1937 (the Act) was part of New Deal agricultural policy. The Act allowed producer groups to organize and establish organizations (called “marketing orders”) that would be administered and enforced by the USDA. The stated objective of the Act was to maintain a “stable and orderly” market by allowing producers to collectively control the supply of the product. Marketing orders can be created by the petition of producers in a region and are binding regulations for the entire industry in a specific area (e.g., raisins in California)

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9 Some history is available at CALIFORNIA RAISINS, http://calraisins.org/about/the-raisin-industry/history/ (last visited on Dec. 9, 2015).
11 7 U.S.C.A. §§ 601-614 (West 1933). The Agricultural Adjustment Act of 1933 was the most important part of this package and established federal subsidies and production controls designed to increase agricultural commodity prices back to their all time highs during the early 1910s.
12 Id. Once a marketing order is in place it is binding on all producers in the region, including new entrants.
once they are approved by producers and the U.S. Secretary of Agriculture. Marketing orders have been and still are in place for milk and many other specialty crops, including avocados, almonds, and hazelnuts. 13

Marketing Order 989 was put into effect in 1949 for raisins grown in California. 14 The Order established the RAC and gave it the authority to control the volume of output through the control of raisins via the National Raisin Reserve. The RAC is comprised of 47 members including 30 representing producers, 10 representing handlers, 1 representing a cooperative bargaining association, and 1 public member. 15 The RAC has its headquarters in Fresno, California and has eight international representatives, mostly in Asia and Europe.

Most importantly, the RAC has the authority to control the volume of raisins to be supplied to the market. The RAC meets annually to determine the amount of raisins to be put into the NRR by setting a percentage “reserve requirement” on all handlers of

15 See generally, RAISIN ADMINISTRATIVE COMMITTEE, http://raisins.org (last visited Dec. 9, 2015). The RAC can also regulate raisin quality, direct research and be involved in promotion and marketing.
raisins. The “reserve tonnage” will be stored under the direction of the RAC, while the “free tonnage” will be sold on the market. Table 2 shows the RAC withholding rates from 1990-2013. The table shows that this rate varies widely, sometimes covering over 45% of the crop and other times leaving no reserve at all. For the case at hand, the years 2002-2003 and 2003-2004 had reserve requirements of 47% and 30%, respectively. Reserve raisins are often exported, and the RAC often subsidizes raisin exporters. In some cases the RAC may pay producers a pro rata price with funds left after reserve raisins are sold, although in some years payments to growers have been zero.

16 The structure of the industry is such that producers typically deliver their raisins from the field to specialized firms called ‘handlers’ that clean, grade and packages raisins.

17 Marketing Reports, Raisin Admin. Comm., Marketing Policy and Industry Statistics 2013 (Oct. 24, 2013) (on file with the author) indicate that the RAC recommends a reserve percentage which is then modified by the Secretary of Agriculture (and always down). For example, for the 2002-2003 the date was April 4, 2003 and for 2003-2004 the date was August 10, 2004.
C. RAISINS IN THE 21st CENTURY

The case involving the Hornes arose early in the 21st century, after which the raisin industry had seen important and continuing changes since the origin of the RAC. Foreign competition had become strong; Turkey had even produced more raisins than California in some years. Competition for land in the San Joaquin Valley, primarily from producers of wine grapes and almonds, had reduced the acreage and output or grapes for raisins. Acreage in raisin grapes had been just over 200,000 since the 1920s but yields

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18 The information in this chart reflects various reports of the Raisin Administrative Committee.
19 Id. Acreage in raisins is now around below 200,000.
II. **Deconstructing Horns with Economics**

In this section I use economics to examine the behavior of the RAC, Horns and other producers; and to examine the claims by the Horns that the RAC’s actions amounted to an uncompensated taking. I also put the opinions of the Justices into an economic context.

A. **The Raisin Administrative Committee as a Cartel**

Economists have a long history of studying agricultural marketing orders and the scholarly literature treats them as producer cartels that use the USDA to enforce their actions. This literature shows that marketing orders have the effect of raising prices (usually domestic). Cartels can raise prices using various methods such as explicit agreement on prices above those generated by an uncoordinated competitive industry, or by restricting output below what would emerge in a competitive market. Figure 1

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20 Id. Yields in the 1920s and 1930s were around 5-6 tons per acre and since 2000 they have averaged more than 10 tons per acre.  
21 See Sun-Maid’s petition to the Secretary of Agriculture (2014).  
22 For a summary, see, **DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION**, 455-460 (2d. ed. 1994). Most of this literature has focused on milk marketing orders which have been present throughout the US since the New Deal. See also Peter Berck & Jeffrey M. Perloff, **A Dynamic Analysis of Marketing Orders, Voting, and Welfare**, Am. J. of Agric. Econ, Aug. 1985, at 487-96.
illustrates how the RAC can act as a cartel in the domestic raisin market.

FIGURE 1: MARKET STRUCTURE AND RAISIN PRICES

The figure shows a demand curve (D) and seasonal fixed supply curve (S) which in a competitive market would generate a competitive price ($p^c$) and output ($Q^c$). The RAC acting as a perfect cartel, however, could choose to limit output to $Q^{RAC}$ (with the difference $Q^c - Q^{RAC}$ being added to the National Raisin Reserve) and generating a monopoly price ($p^{RAC}$). As long as demand is inelastic the total revenue (and total profits) increases for producers

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23 A more complicated analysis could consider dynamic issues involved in investing in long-lived crops like grapes) and firm expectations about RAC behavior.
24 Under the assumption that marginal costs are zero the RAC picks a quantity for which marginal revenue is also zero.
and in turn the consumers’ value from the raisin market diminishes. In the simplest case in which all raisin producers are homogeneous, each grower gets an equal share of the RAC-generated profits.

The model depicted in Figure 1 does not consider the foreign market or how the raisins in the reserve should be handled. It simply assumes the raisins in the reserve are kept off the market. In reality the RAC has routinely sold raisins from the reserves in the foreign market, thus effectively implementing a price discrimination scheme among domestic and foreign buyers. Economic analysis of agricultural marketing orders indicates that the RAC behaves as a price-discriminating cartel agency that segments the market into domestic and foreign components. The domestic market is thought to have a rather inelastic demand—meaning price increases (which imply output reductions) can lead to increases in total revenue. The foreign demand, however, is known to be relatively elastic so that quantity reductions do not

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25 Elasticity indicates how responsive consumers are to changes in prices. Inelastic demand means that price increases will lead to relatively small reductions in quantity purchased so that total market value of sales actually increase with higher prices. When demand is elastic there is no clear economic rationale for a cartel to restrict output because a fall in revenue is a decline in output. While there is not a large literature on raisin demand elasticity, the study by Green (1999) shows raisin demand to be inelastic and all other California fruits have similarly inelastic demand. See RICHARD D. GREEN, Demand for California Agricultural Commodity, U.C. DAVIS UPDATE, 1999.

26 There is also a deadweight loss to society from the reduction in output.

27 The model also does not consider price discrimination within the domestic market. It also assumes that it is not feasible for the RAC to limit production upfront.

28 See DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 455-60 (2d ed. 1994), for a slightly different model of a price discriminating agricultural marketing order in which the order sells the crop at a monopolistic price in the domestic (fresh) market by restricting output and then selling the remainder of the crop below the competitive price in a foreign (processed) market. Growers receive a ‘blended’ price that is higher than the competitive price and domestic consumer welfare is reduced from a competitive market. The RAC, however, does not use blended prices like some other marketing orders.
lead to revenue increases. The foreign demand is more elastic because there are more substitutes for U.S. raisins in international markets.

B. WAS MARVIN HORNE A CARTEL DEFECTOR AND IMPLICITLY COMPENSATED FOR HIS RASINS?

Given that the RAC is best understood as a government-enforced cartel, the most economically reasonable interpretation of Horne’s behavior is that he was a defector on the cartel. Horne had been in the raisin business since 1969 and had been a member of the RAC for two years as well.29 In 2002, he vertically integrated into handling in order to avoid contributing to the NRR.30 His company, Raisin Valley Farms, handled raisins from 60 other farmers as well, amounting to more than 1,500 tons during the 2002-2003 and 2003-2004 seasons in question. Horne’s share of the raisins handled during these seasons were 27% in 2002-2003 and 12% in 2003-2004.

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29 See Horne, 133 S. Ct. at 2058 for background on Horne. I have also received information from plaintiff’s attorney Brian Leighton.
30 The RAC used private investigators to determine that he was not complying with the RAC’s raisin reserve rates.
Figure 2 shows the behavior and profits of a representative raisin grower (e.g., Horne) under competitive and RAC market scenarios. At the competitive market price \( (P_C) \) Horne would produce \( q^c \) and earn no profit. If Horne and all other growers cut their output to \( q^{\text{RAC}} \) they will get the RAC-induced price \( (P^{\text{RAC}}) \) and earn cartel profits. What Horne essentially did by refusing to turn over raisins to the NRR was to produce and sell \( q^C \) (or what I label \( q^{\text{effective}} \)) at the RAC-induced cartel price. All growers have such an incentive which is likely why the RAC collects the reserves from handlers to make enforcement easier simply because there are

\[ \text{Figure 2: Representative Raisin Grower and Raisin Prices} \]

\[ \text{\( $/\text{ton of raisins} \)} \]

\[ \text{\( \rho^{\text{RAC}} \)} \]

\[ \text{\( q^{\text{RAC}} \)} \]

\[ \text{\( q^C = q^{\text{effective}} \)} \]

\[ \text{\( \text{Tons of raisins} \)} \]

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31 A more sophisticated analysis might model the decision to grow raisins first (rather than such crops as almonds or wine grapes) and that how much to plant given the existence of the RAC and the RAC's rules. Finally, the model could consider the decision to comply with RAC policy once raisins are grown.

32 For simplicity the figure is drawn using standard marginal and average cost curves to show the (long run) competitive output for a representative firm. Figure 1, however, show fixed (and short run) supply curves for the raisin industry.
fewer handlers than growers. Horne admitted he integrated into handling to attempt to avoid contributing to the reserve which raises the prices. What Horne was effectively asking for in compensation for his raisins was a price that was only possible because of the RAC’s actions (and abided by other growers). The government claimed that the RAC only raised the price by $73 per ton to $810 per ton when it withheld 30% of the crop in reserve.33 This rather small (9.7%) price increase implies an implausible demand price elasticity of -3.5, which would undermine the rationale for withholding the crop completely.34

The most compelling argument for Horne’s claim that he was not compensated, is that he was not given his “fair” share of the RAC profits and that other growers got relatively more of the RAC profits, perhaps through export subsidies to access foreign markets. Still, it is unlikely Horne would have been better off without the RAC, the NRR, and constraints on selling raisins. Under reasonable estimates of demand elasticity Horne was compensated for his raisins with higher profits because of the RAC.35

34 See generally Carlo Russo, Richard Green, and Richard Howitt, Estimation of Supply and Demand Elasticities of California Commodities (Dep’t of Agric. and Res. Econ., Working Paper No. 08-001), available at https://www.cdfa.ca.gov/files/pdf/Demand&SupplyElasticityMajorCACrops.pdf (An examination of many studies of demand elasticity for California commodities show that inelastic demand (less than -1.0) estimates for a wide variety of agricultural commodities). For the case in which demand elasticity were -1.0, a RAC price of $810 per ton would imply a competitive price of $623 if the 30% in reserve were returned to the market. This is because with an elasticity of -1.0 a 30% price increase accompanies a 30% quantity reduction (from the RAC reserve) and a price of $810 is a 30% increase in the competitive price of $623.
35 See Brief of Sun-Maid Growers in support of Respondent at 10, Horne v. U.S. Dep’t of Agric., 133 S. Ct. 2053 (2013) (No. 12-123). (“That is to say, petitioners sought to take advantage of the higher market price for raisins that resulted from their competitors’ compliance with the marketing order. Having been caught ‘free riding’ on the marketing order at the expense of their competitors, petitioners now seek
C. Economic Content of the Jurists’ Opinions

Table 3 summarizes the economic content of the opinions of the Justices. None of the opinions, except perhaps Bryer’s dissent, indicate an understanding of the RAC as a government-enforced raisin cartel. Neither the majority nor Thomas’s concurrence consider the possibility that Horne was compensated by higher prices resulting from the RAC’s withholding of raisins, although Bryer explicitly does this. Sotomayor is silent on this issue.

**Table 3: Economic Content of the Opinions in Horne v. USDA**

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Cartel or Monopoly</th>
<th>Compensation</th>
<th>Public Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roberts (majority)</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Thomas (concurring)</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Bryer (dissent)</td>
<td>Implied</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Sotomayor (dissent)</td>
<td>NO</td>
<td>??</td>
<td>Implicit</td>
</tr>
</tbody>
</table>

refuge in high constitutional principle”), and at 14 (“All producers, including amici Sun-Maid growers and RBA growers, were affected by the marketing order’s reserve-pool requirements—but only the petitioners exploited the industry’s collective restraint for personal gain.”).
The economic issues surrounding whether or not the goal of RAC and the NRR can be considered a “public use” is not explicitly discussed, though Thomas’ dissent does question whether or not the public use requirement for a government taking has been satisfied. In economic terms the RAC serves to redistribute gains from trade in the raisin market from consumers to producers via the creation of cartel profits and serves to reduce overall gains from trade in this market. In general economists would consider this welfare-reducing because there are also costs associated with the enforcement of the cartel and because there also fewer total gains from trade. Takings jurisprudence, however, does not use economic efficiency as a criterion for public use. Sotomayor does not address public use, though her overall approach that the RAC behavior fits the regulatory taking framework implies that the public use requirement is satisfied.

CONCLUSION: LAW AND ECONOMICS IMPLICATIONS

Horne has been hailed by some as a strong limit on government power by strengthening the takings doctrine and by effectively shutting down a New Deal era government program. 36 The economics of the case, however, suggest more limited and somewhat ironic interpretations. One interpretation, from my title, is: good law, bad econ. In this interpretation the Court’s economic analysis was bad or missing, but the ruling got rid of an efficient program and will likely limit the ability of government agencies to

36 See, e.g., Trevor Burris, Victory Over The Raisin Administrative Committee: The New Deal Case That Took 80 Years To Bring, FORBES, http://www.forbes.com/sites/trevorburris/2015/06/22/victory-over-the-raisin-administrative-committee-the-new-deal-case-that-took-80-years-to-bring/ (last visited on Dec 8, 2015) (noting that many New Deal era programs were economically wasteful).
act as cartels for a group of private firms. A slightly different interpretation is: bad law, good econ. This interpretation suggests that the legal reasoning is flawed or convoluted but that the rule increases the efficiency of agricultural policy.

I have argued that the Raisin Administrative Committee is best viewed as a government-enforced cartel that has substantially raised the domestic prices of raisins since its inception just after World War II. The plaintiff Horne is best viewed as a cartel defector who benefited from the supply restriction of the RAC and thus was most likely compensated for the taking of his raisins. In defending the RAC the government chose not to stress this point perhaps because there is little political support for such agricultural market orders today. The decision in the court reiterated the rule that personal as well as real property must be compensated if taken by the State. This decision is unlikely to have much impact on state eminent domain actions which are overwhelmingly involved with real property for the construction of roads, schools, and so on. The rule might, however, limit the ways in which the State can enforce cartels which would be efficiency enhancing.

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37 If the RAC cannot ‘take’ raisins for the NRR, then its price increasing ability is limited to other methods – which might run afoul of antitrust laws.