

IN THE 251ST DISTRICT COURT
Potter County, Texas

Kay Floyd, et al,	§	
Plaintiffs,	§	
	§	
vs.	§	NO. 87,589 – C
	§	
American Quarter Horse Association	§	
Defendant.	§	
	§	
	§	

AFFIDAVIT OF CHRISTOPHER C. PFLAUM, PH.D.

My name is Christopher C. Pflaum, Ph.D. I am over the age of twenty-one (21) years, have not been convicted of a felony or crime involving dishonesty, and am competent and not otherwise disqualified to make this Affidavit.

The plaintiffs in this matter have asked me to provide my opinion on the effects of the American Quarter Horse Association’s (AQHA) Rule 212 (“the Rule”) on purchasers of American Quarter Horses (AQH). Specifically, I have been asked to comment on whether the Rule unreasonably restricts the supply of Quarter Horses and thereby raises the price. Such restrictions on output are known in antitrust economics as “naked restraints” and have generally been found by the courts to be per se violations of Section 1 of the Sherman Antitrust Act and corresponding state fair competition and antitrust laws.

Section 1 - Qualifications and Experience:

My education, work experience, publications and speeches, and previous testimonies are contained in the curriculum vitae attached to this affidavit as Appendix 1. I have previously served and currently act as a consultant to numerous clients in a broad array of business litigation matters, including numerous antitrust matters at both the state and federal level.

Foundation for Opinions:

I have served as a consultant or testifying expert in numerous antitrust, business litigation and regulatory matters before both state and federal courts and numerous administrative agencies. I have also served as a consultant to businesses in matters concerning competition and business behavior. As a result of my formal education, which includes a Ph.D. with major areas in finance and operations management, prior litigation and regulatory engagements, extensive study of the economic analysis of law and application of financial and economic theory and practice to matters at bar, employment as a utility regulator and regulatory consultant, I have developed a substantial expertise in antitrust economics.

In preparing this declaration and rendering my opinions in this matter, I consulted numerous learned treatises on the economics and antitrust as well as articles on the economics of breeding horses. I also consulted the web sites of the AQHA and Equifacts, spoke with breeders and generally familiarized myself with the business of breeding American Quarter Horses. At my request, Mr. Robert Garner, the attorney for the plaintiffs also collected information on the cost of breeding and raising an American Quarter Horse and sale prices of genetically identical and similar American

Quarter Horses differentiated only by AQHA registration. The sources that I consulted are presented in Appendix 2 to this affidavit.

Summary of Opinion:

It is my opinion that Rule 212 is a naked restraint as that term is generally construed in antitrust economics. Because of the rule, the supply of high quality American Quarter Horses is artificially restricted and the price is artificially increased resulting in consumers paying higher prices and receiving animals of inferior quality than they would in the absence of the restraint. In addition, the breeders of the high quality animals, specifically the owners of high quality American Quarter Horse mares earn lower profits than they would in the absence of the restraint. The rule also harms consumers by reducing the overall quality of American Quarter Horses offered for sale. Finally, by causing a reduction in the quality of registered Quarter Horses, the rule makes registered Quarter Horse competitions (race, bridal, cutting) less competitive than they otherwise would be thereby reducing the value of those events to spectators.

The Supply of Registered American Quarter Horses:

Though there has been, to the best of my knowledge, no scholarly research on the economics of breeding AQHs, there is a small body related to the breeding of Thoroughbred horses. With appropriate modifications to account for differences in breeding practices, the findings of these studies can be used to model the supply and demand for AQHs.¹

¹ The Jockey Club of New York is the governing body of the Thoroughbred industry. Its rules require natural breeding, which means full cover of the mare by the Stallion and the carrying of the foal by the mare. AQHA rules allow artificial insemination and the use of a recipient mare.

As a first step in understanding the market for registered AQHs, we can examine the dynamics of the Thoroughbred market. There is a limited supply of mares who can bear a foal of a particular quality with relative certainty. Other mares may bear a high-quality foal but it is less likely, therefore one must breed several of them to produce one such foal. The result of this is that the supply curve has a horizontal portion representing the number of foals which are expected from the high-quality mares and then a positively sloped region representing the increasing cost of achieving high-quality offspring from increasingly low-quality mares.²

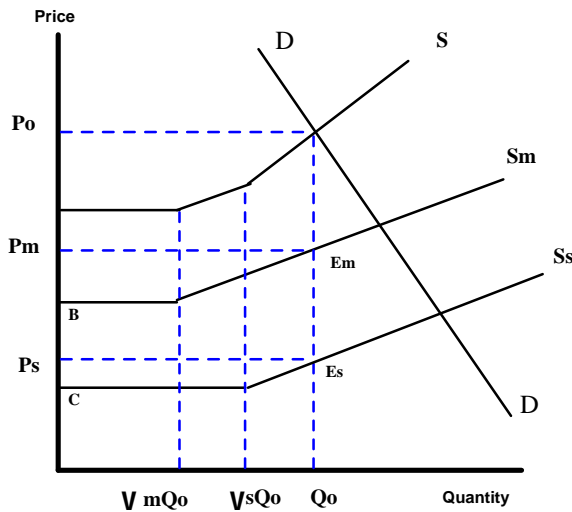
The supply of stud services has a similar supply curve. Though a stud can service more than one mare in a breeding season, the number is limited by the breeding window, the time required to transport the mare and the time needed to breed. Like the case of a mare, a high-quality foal can result from the use of an inferior stud but the probability of a high-quality outcome is lower hence, again, more foals must be bred and born to achieve a single high-quality outcome than would be the case with a high quality stud.

The model of the pricing of Thoroughbreds under the conditions outlined above is presented below in Figure 1. The marginal cost curve (supply curve) for foals is equal to the summation of the marginal cost curves for brood mare services and stud services. The curve labeled *S_s* represents the marginal cost of stud services used in producing high quality foals. When high quality stallions are employed, *S_s* is horizontal; but when lower quality stallions are used, *S_s* has a positive slope which

² This discussion is adapted from: Coelho, Philip R. and James E. McClure. "Barriers to Entry in the Market for Stud Services: Government and 'Non-Profit' Institutions in Collusion." *Economic Inquiry*. October 1987. pp. 659-70.

reflect that stallions of lower quality must sire more foals to produce the “average” foal sired by higher quality stallions. The same is true for the supply curve for the services of mares.

Figure 1
Market for Foals



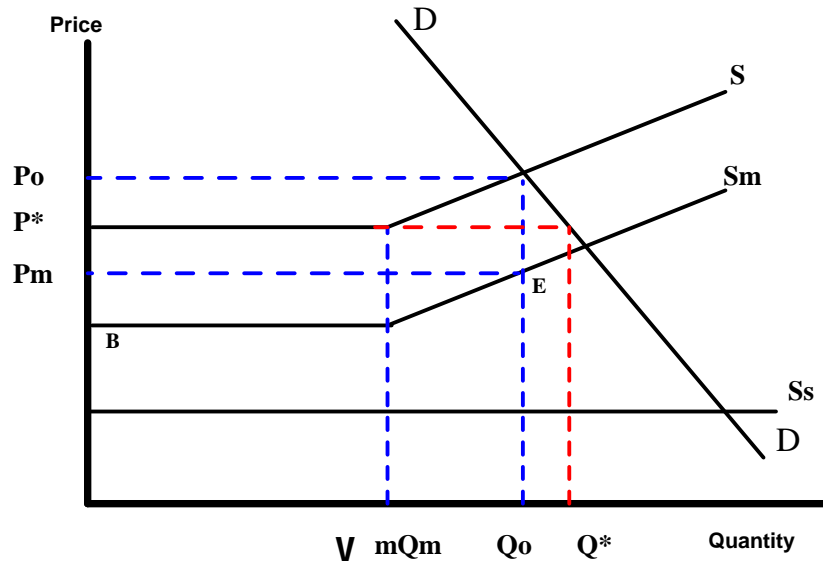
Key

- S** -Marginal Cost Foals (Supply Curve)
- Sm** -Marginal Cost of mares.
- Ss** -Marginal Cost of stallions.
- DD** -Demand Curve
- PoQo** -Equilibrium Price and Quantity given market restrictions.
- $a_m Q_o$** -Quantity of high quality mares used to meet demand for high quality foals.
- $a_s Q_o$** -Quantity of high quality stallions used to meet demand for high quality foals.

We can modify the Coelho and McClure model to represent the market for AQHA registered Quarter Horses by noting that artificial insemination and in vitro fertilization are permitted by the AQHA. Since a stallion can be “jumped” several times a week and sperm can be transported to the stable of the mare, a given stallion can sire a large number of foals. Therefore, in the case of AQHA registered Quarter Horses, the marginal cost of AQHA stallions, curve Ss, is horizontal. With this modification, we have model of registered AHQ pricing, Figure 2 below.

As in the case of Thoroughbred Horses, there is a limited supply of mares of high quality which causes the supply curve to have a positive slope beyond $a_m Q_o$, where the supply of those mares

Figure 2
Market For Registered American Quarter Horses



is exhausted. Unlike the case of Thoroughbreds, however, the supply curve for stud service is horizontal. With restriction of one foal per mare, the market-clearing price of a foal is P_o and Q_o foals are produced.

If the prohibition on multiple registered foals from a single mare is eliminated, the perfectly elastic portion of the supply curve elongates as the supply of eggs from high quality mares increases. The market price then falls from P_o to P^* and output (number of foals) increases from Q_o to Q^* . It is demonstrated, therefore, that the limitation on registrations imposed by the AQHA reduces supply and increases price – the classic outcome of an artificial restraint on output.

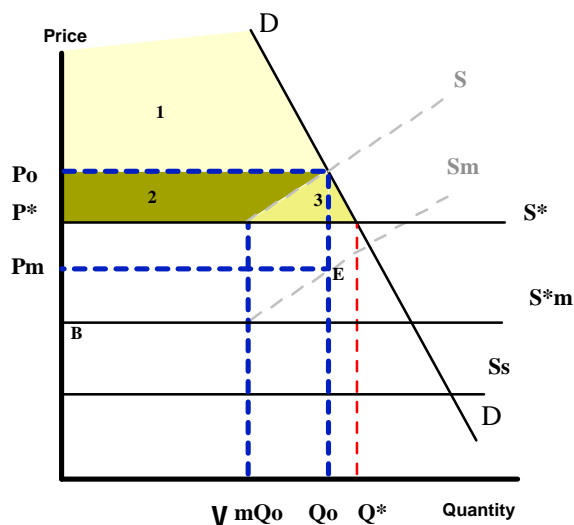
Loss of Consumer Welfare Due to Restraint:

It has often been said by the courts that the purpose of the antitrust laws are to protect competition, not competitors. Vigorous competition causes prices to be at cost and firms in the market to be efficient and innovative. If production is artificially held down, prices are higher and output is less than under perfect competition.

Economists measure the loss resulting from imperfect competition as the reduction in “consumer surplus.” Consumer surplus is the difference between the total cost spent by all consumers of a good when they purchase it at the market price and what a producer could have charged those same consumers if he had been able to price discriminate and charge each of them the amount they “valued” that good. Since the market clearing price is the price that the customer who places the least value on the good is willing to pay that is above the cost to the producer (marginal cost), that price is always the lowest price at which the producer will supply the good. Other customers, known as infra-marginal consumers, all place a higher value on the good and would be willing to pay a higher price. Each consumer “gains” by the difference in the price he is willing to pay and the market price. If the price is artificially raised (or output restricted), fewer units are purchased by consumers and surplus is reduced.

In Figure 3, I show how the restrictions imposed by the AQHA reduce consumer surplus. Under a competitive market, the price of a foal is P^* and Q^* is the number of foals sold. Consumers pay a total of P^* times Q^* for foals. Under perfect price discrimination, they would have paid P^* times Q^* plus the area under the curve D above the supply curve S^* (areas 1,2 and 3). Consumers

Figure 3
Loss of Consumer Surplus Due to Output Restriction



save, therefore, the sum of areas 1, 2 and 3. This savings is called “consumer surplus” by economists and the generation of consumer surplus is one of the prime benefits of competition.

If output is restrained, the supply curve of mares kinks and becomes curve S_m rather than curve S^*m . With the demand curve unchanged,³ the price rises from P^* to P_o and output falls from Q^* to Q_o . With the higher price and lower quantity, consumer surplus is reduced to area 1. The areas under P_o and above P^* , areas 2 and 3 become producer surplus and deadweight loss; respectively. In other words, the output restriction causes the gains from trade in area 2 to be transferred from consumers to producers and the gains in area 3 are lost completely. The outcome is that consumers lose, producers gain and society as a whole loses on net.

³ In a fully-developed model, we would recognize that an increased supply of high-quality foals would increase competition for prize money thereby reducing expected earnings from a foal causing the demand curve to shift to the left and offsetting some of the gains to increased supply.

Demand Side Considerations:

In the *Complaint* in this matter, the plaintiffs' allege that the Rule results in a boycott. Essentially, this section of the *Complaint* raises the issue of the effect of the Rule on the demand for AQHA-registered Quarter Horses. This issue has also been explored in the literature on Thoroughbreds.⁴ The finding in the literature is that the demand for a race horse is a function of, among other factors, expected winnings. The smaller the number of horses competing for a pool of purses, the higher the price of horses, all other things equal.

This finding in the Thoroughbred market can be extended to that for race and show Quarter Horses. Since Quarter Horses which are not AQHA-registered can only compete in non-AQHA events, the pool of prize money available to them is reduced and their value is lower. Similarly, the pool of horses competing for prize money in AQHA-sanctioned events is reduced which raises the likelihood of any given registered Quarter Horse winning (because of less competition) which increases the price a buyer is willing to pay.

In economic parlance, the boycotting of non-registered Quarter Horses shifts the demand curve towards the origin (to the left). If the intersection of the supply and demand curves is on the elastic portion of the demand curve, this will decrease the supply and increase the price of registered Quarter Horses.

⁴ See: Neiberg, J. Shannon and Richard Thalheimer, "Price Expectations and Supply Response in the Thoroughbred Yearling Market," *Journal of Agricultural and Applied Economics*, 29 (December 1997): 419-435 and Karungu, Peter, Michael Reed and Douglas Tvedt, "Macroeconomic Factors and the Thoroughbred Industry," *Journal of Agricultural and Applied Economics*, 25 (July, 1993); 165-173.

Practical Considerations:

The preceding exercise demonstrates that the restraint on the output of foals by the AQHA causes price to be artificially increased and output to be restricted. This is the classic outcome of monopoly collusion or cartelization. Furthermore, there appear to be no gains to consumers in that the restraint reduces rather than improves competition and, as far as I can observe, provides no benefit to anyone other than marginal breeders who but for the restriction on producing foals from animals superior to their stock would not be in the breeding business. In other words, the restraint protects inefficient producers of lower quality products. This is not an economically efficient outcome as it leads to lower quality and higher prices.

STATE OF KANSAS)
) ss.
COUNTY OF JOHNSON)

CHRISTOPHER C. PFLAUM, being first duly sworn according to law, says that he is the President of Spectrum Economics, that he is familiar with the contents and Supporting Materials which follow and that the facts and information set forth therein are true and correct to the best of his knowledge, information and belief.

Christopher C. Pflaum

Subscribed and sworn to before me this 18th day of July, 2000.

Judy C. Conn
Notary Public

My Commission Expires: August 10, 2001