575 F.2d 1056 (1978)

SmithKLINE CORPORATION
v.
ELI LILLY AND COMPANY, Appellant.

No. 77-1232.

United States Court of Appeals, Third Circuit.

Argued February 21, 1978.
Decided April 3, 1978.

1057*1057 Pepper, Hamilton & Scheetz, Philadelphia, Pa., Dewey, Ballantine, Bushby, Palmer & Wood, New York City, for appellant; John G. Harkins, Jr., Philadelphia, Pa., Edward N. Sherry, Jack Kaufmann, John F. Collins, New York City, of counsel.

Frederic L. Ballard, William S. Rawls, Lewis A. Grafman, Philadelphia, Pa., for appellee; Ballard, Spahr, Andrews & Ingersoll, John L. Boyle, Richard L. Sherman, Philadelphia, Pa., of counsel.

Before ALDISERT, VAN DUSEN and WEIS, Circuit Judges.

OPINION OF THE COURT

ALDISERT, Circuit Judge.

The major question for decision is whether the district court in a non-jury trial erred 1058*1058 in defining the relevant product market in a proceeding brought by SmithKline Corporation against Eli Lilly and Company under § 2 of the Sherman Act, which proscribes monopolies and attempts to monopolize. The court determined that the relevant product market is the nonprofit hospital market for a class of antibiotic drugs known as cephalosporins and that the relevant geographic market is the United States. Having so defined the relevant market, the court concluded that Lilly had illegally monopolized it. A permanent injunction against Lilly's illegal marketing practices was issued. Lilly has appealed, taking issue with the court on its market formulation; it would expand the relevant product market to include all anti-infective drugs prescribed by physicians. We affirm.[1]

1059*1059 *I.*

The parties to this lawsuit are major manufacturers of human ethical pharmaceutical products which they sell in interstate and foreign commerce. Both manufacture antibiotic or anti-infective drugs; these are substances produced by micro-organisms that are active against other micro-organisms. Used by physicians to treat bacterial infections, antibiotics include, *e. g.,* ampicillins, carbenicillins, gentamycins, penicillins, tetracyclines, and nitrofurantoins. The companies also manufacture other bacteria inhibiting drugs, such as

sulfas, which are not denominated antibiotics because they are composed of chemicals not produced by living organisms. Antibiotics are available in parenteral (administered by intravenous or intramuscular injection) and oral forms.

In 1964 Lilly introduced the first cephalosporin antibiotic, Keflin (cephalothin), into the United States market. It has subsequently introduced four additional cephalosporin forms: Keflex (cephalexin), Loridine (cephaloridine), Kafocin (cephaloglycin), and Kefzol (cefazolin). Lilly has United States patents on all its cephalosporin antibiotics except cefazolin. It is Lilly's marketing practices for cefazolin that bring this case before us.

From 1964 until 1973, a period during which cephalosporins gained wide acceptance in the medical field, Lilly enjoyed a complete and legal monopoly by virtue of its patents. Beginning in 1973, however, competition emerged as other manufacturers began to market new varieties of cephalosporin drugs. The first such competitor was plaintiff-appellee SmithKline, who entered the competition with cefazolin, which it marketed under the trade name Ancef. SmithKline's Ancef is identical to the cefazolin introduced shortly thereafter by Lilly under the trade name Kefzol. SmithKline and Lilly, the only producers of cefazolin in the United States, hold non-exclusive United States licenses granted by the Japanese developer of the formula.

The following chart lists the various cephalosporins now on the market:

CEPHALOSPORINS

Generic Name	*Brand Name*	
INJECTABLE		
Cephalothin (1964)	Keflin (Lilly)	
Cephaloridine (1967)	Loridine (Lilly)	
Cefazolin (1973)	Kefzol (Lilly)	(generic
	Ancef (SmithKline)	equivalents)
Cephapirin (1974)	Cefadyl (Bristol)	
Cephradine (1974)	Velosef (Squibb)	
ORAL		
Cephalexin (1972)[2]	Keflex (Lilly)	
Cephaloglycin (1971)	Kafocin (Lilly)	
Cephradine (1974)	Anspor (SmithKline)	(generic
	Velosef (Squibb)	equivalents)

SmithKline's entry into the cephalosporin market was preceded by a five-year research and market development program during which more than $20,000,000 was expended. Some 500 sales representatives visited physicians to explain Ancef's characteristics and effectiveness as an antibiotic, particularly its superiority over Keflin for intramuscular, as opposed to intravenous, injection. Both companies introduced price-related marketing plans, Lilly to combat competition, and SmithKline to break into the cephalosporin market.

Prior to encountering competition, Lilly had adopted a marketing program known as the Cephalosporin Savings Plan (CSP), designed to make its cephalosporins more competitive with other antibiotics and to expand its sales. The CSP provided that a 1060*1060 rebate in the form of Lilly merchandise would be paid to hospitals based on the total amount of Lilly cephalosporin purchased. As competition increased, Lilly instituted a Revised CSP effective

in April 1975. The monopolistic effects of this revised plan constitute the gravamen of the present dispute. The Revised CSP provides for a rebate in much the same form, but at lower rates than the original CSP. In addition, however, the Revised CSP provides for an additional three percent (3%) bonus rebate, based on the purchases of established minimum quantities of any three of Lilly's five cephalosporins.

At the same time, SmithKline had a rebate program of its own, the Price Insurance Plan (PIP), allowing a five percent (5%) rebate, paid in the form of SmithKline merchandise, on hospital purchases of Ancef; additional rebates were available for certain volume purchases of Ancef and Anspor, SmithKline's other cephalosporin.

The comparative market positions of the cephalosporins are illustrated by the district court findings:

	1970		*1971*		*1972*	
	Volume	*Share*	*Volume*	*Share*	*Volume*	*Share*
Total Cephalosporins[**]	$ 67,325	100.0%	$ 81,239	100.0%	$ 98,520	100.0%
Lilly	67,325	100.0	81,239	100.0	98,520	100.0
Keflin (9/64)	40,693	60.4	51,062	62.9	62,796	63.7
Keflex (2/71)	.....	....	11,239	13.8	20,752	21.1
Kefzol (11/73)	.....	....	.....	....	.....	....
Keflin Neutral (5/75)	.....	....	.....	....	.....	....
Loridine (3/68)	25,622	38.1	17,916	22.1	14,607	14.8
Kafocin (7/70)	994	1.5	1,016	1.3	356	0.4
Cephaloridine (9/68)	16	....	6	....	9	....
Bristol						
Cefadyl (5/74)	.....	....	.....	....	.....	....
SmithKline	.....	....	.....	....	.....	....
Ancef (10/73)	.....	....	.....	....	.....	....
Anspor (10/74)	.....	....	.....	....	.....	....
Squibb						
Velosef (8/74)	.....	....	.....	....	.....	....

	1973		*1974*		*1975*[*]	
	Volume	*Share*	*Volume*	*Share*	*Volume*	*Share*

Total Cephalosporins[**]	$105,405	100.0%	$123,771	100.0%	$65,007	100.0%
Lilly	103,858	98.5	111,177	89.8	57,611	88.6
Keflin (9/64)	68,233	64.7	67,854	54.8	30,630	47.1
Keflex (2/71)	22,945	21.8	25,346	20.4	13,834	21.3
Kefzol (11/73)	1,149	1.4	13,593	11.0	8,355	12.9
Keflin Neutral (5/75)	.....	....	.....	....	3,340	5.1
Loridine (3/68)	10,996	10.4	4,322	3.5	1,430	2.2
Kafocin (7/70)	191	0.2	61	0.1	21	....
Cephaloridine (9/68)	14	....	1	....	1	....
Bristol						
Cefadyl (5/74)	.....	....	1,865	1.5	1,766	2.7
SmithKline	1,547	1.5	10,425	8.5	5,292	8.1
Ancef (10/73)	1,547	1.5	10,355	8.4	4,988	7.7
Anspor (10/74)	.....	....	70	0.1	304	0.5
Squibb						
Velosef (8/74)	.....	....	304	0.3	338	0.5

1061*1061 It can readily be seen that Lilly's Keflin, usually administered in intravenous form, and Keflex, an oral drug, have dominated the cephalosporin market. As Lilly's other cephalosporins, Loridine and Kafocin, have diminished in competitive importance, Kefzol has risen to a position as Lilly's third-ranking cephalosporin, and it is clear that Lilly and SmithKline were in direct competition with their generically equivalent Kefzol and Ancef. Another competitive factor appreciated by the two companies is that the cefazolin formula is a therapeutic equivalent of the market leader Keflin, yet is more suitable for administration by intramuscular or intravenous injection—the former being a simpler and apparently less expensive procedure—and offers more sustained and higher blood levels. Thus, the Kefzol-Ancef formula offers similar therapeutic features at a lower cost per patient than Keflin, and is therefore a potentially strong competitor of that drug. An examination of the sales figures, *supra,* reveals that the cefazolin formula — Kefzol more so than Ancef — has gained popularity at some expense to Keflin's market share.

The economic significance for Lilly is great: the district court found that profits on the patented Keflin are far higher than on Kefzol, for which Lilly holds a non-exclusive license and in the pricing of which it must consider the existence of a competitor, SmithKline. To the extent that the cefazolin formula is accepted as a substitute for the cephalothin formula (Keflin), Lilly faces the loss of its monopolistic profits. Thus, in addition to the normal economic incentive to preempt a market, an additional incentive for Lilly to control the cefazolin market is present on these facts: Lilly would stand to preserve the market position

of Keflin by discouraging widespread acceptance in the medical field of Kefzol or Ancef as a substitute drug.

It was the theory of SmithKline, and accepted by the district court, that to further its economic ends, Lilly instituted the Revised CSP, the linchpin of which was the well established hospital market for its patented drugs, Keflin and Keflex. The district court determined that the effect of the Revised CSP was to combine—for purposes of pricing—hospital purchases of Keflex and Keflin with those of Kefzol. An examination of the working of the Revised CSP makes this conclusion inescapable. Although eligibility for the 3% bonus rebate was based on the purchase of specified quantities of any three of Lilly's cephalosporins, in reality it meant the combined purchases of Kefzol and the leading sellers, Keflin and Keflex. In 1974 these two market leaders accounted for 75% of all hospital cephalosporin purchases. Although hospitals were free to purchase SmithKline's Ancef with their Keflin and Keflex orders with Lilly, thus avoiding the penalties of a tie-in sale,[3] the practical effect of that decision 1062*1062 would be to deny the Ancef purchaser the 3% bonus rebate on all its cephalosporin purchases.

In understanding the effects of Lilly's Revised CSP, the importance of cephalosporins in hospital pharmacies cannot be understated. They are carried in stock by virtually every general hospital in the country. To meet the bonus discounts offered by Lilly, a competitor was forced to more than meet the competition on the one product, cefazolin; it had to match the bonus rebate awarded to the hospital purchaser based on *total* purchases of three cephalosporins, including the leading sellers, Keflin and Keflex. In SmithKline's case, this meant it had to compete "three-on-one". (Brief for Appellee at 36.) In computing its percentage of rebate on the one product, Ancef, SmithKline was forced to meet the total dollar discounts available to purchasers of Lilly's three high volume cephalosporins. Although the Revised CSP only gave a 3% bonus rebate, because of Lilly's volume advantage, in order to offer a rebate of the same net dollar amount as Lilly's, SmithKline had to offer purchasers of Ancef rebates of some 16% to hospitals of average size, and 35% to larger volume hospitals.

II.

"The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71, 86 S.Ct. 1698, 1704, 16 L.Ed.2d 778 (1966).

Appellant does not contest the finding that the United States is the relevant geographic market. The parties' dispute centers instead around what products should be included, SmithKline contending that the relevant market should include only cephalosporin antibiotics and Lilly arguing that it should include all antibiotics. The trial court found that cephalosporins, as a group, are therapeutically interchangeable with other antibiotics only to a limited extent; that they lack price sensitivity and cross-elasticity with other antibiotics; and that a special demand exists for them.

To the extent that the court's findings are based on narrative or historical facts, they can only be disturbed on appeal if they are found to be clearly erroneous. *Rochez Brothers, Inc. v. Rhoades,* 527 F.2d 880, 887 (3d Cir. 1975), *citing* *Krasnov v. Dinan,* 465 F.2d 1298, 1302-03 (3d Cir. 1972). Moreover, the Supreme Court teaches that whether a product is "reasonably interchangeable for the same purpose" is reviewed by the clearly erroneous test, *International Boxing Club v. United States,* 358 U.S. 242, 251, 79 S.Ct. 245, 250, 3 L.Ed.2d 270 (1959), and that for an appellant to prevail "it must show that erroneous legal tests were applied to essential findings of fact or that the findings themselves were `clearly erroneous' within our rulings on Rule 52(a) of the Rules of Civil Procedure", *United States v. E. I. duPont deNemours & Co.,* 351 U.S. 377, 381, 76 S.Ct. 994, 999, 100 L.Ed. 1264 (1956) (*The Cellophane Case*).

III.

We first address the question whether the district court properly defined the relevant market.

A.

The Supreme Court offers this guidance in defining a relevant market: "The `market' which one must study to determine when a producer has monopoly power will vary with the part of commerce under consideration. The tests are constant. That market is composed of products that have 1063*1063 reasonable interchangeability for the purposes for which they are produced—price, use and qualities considered." *The Cellophane Case, supra,* 351 U.S. at 404, 76 S.Ct. at 1012.

These controlling legal precepts have been succinctly explained by Justice Fortas: "In § 2 cases, the search for `the relevant market' must be undertaken and pursued with relentless clarity. It is, in essence, an economic task put to the uses of the law. . . . As this court held in *Brown Shoe* [*v. United States,* 370 U.S. 294, 82 S.Ct. 1502, 8 L.Ed.2d 510 (1962)], the `reasonable interchangeability of use or the cross-elasticity of demand,' determines the boundaries of a product market. 370 U.S. at 325, 82 S.Ct. at 1523. . . . In plain language, this means that the court should [define] the relevant market . . . to include all services which, in light of geographical availability, price and use characteristics, are in realistic rivalry for all or some part of the business [of antibiotics]. . . . [I]f defendant has so large a fraction of the market as to constitute a `predominant' share, a rebuttable presumption of monopolization follows. The fraction depends upon the denominator (the `market') as well as the numerator (the defendants' volume). Clearly, this `presumption' is unwarranted unless the `market' is defined to include all competitors." *United States v. Grinnell, supra,* 384 U.S. at 587, 592-94, 86 S.Ct. at 1712 (1966) (Fortas, J., dissenting on the application of these standards to the facts).

If the search for the relevant market is "an economic task put to the uses of the law," our analysis perforce is directed to basic economic precepts. Elasticity of demand for a product has been defined as the degree by which the amount of a product purchased will change in response to changes in its price. If products are substituted one for another, they will display positive cross-elasticity. Thus, a decrease in the price of one of two substitutes, while the other stays constant, will result in a decrease of sales of the constant price product.

Similarly, an increase in the price of one while the other stays constant will result in an increase of sales of the constant price product. The greater the positive cross-elasticity of demand between two products is, the closer substitutes they are. *See* L. Sullivan, Hornbook of the Law of Antitrust 53-54 (West 1977).

In sum, defining a relevant product market is a process of describing those groups of producers which, because of the similarity of their products, have the ability — actual or potential — to take significant amounts of business away from each other. A market definition must look at all relevant sources of supply, either actual rivals or eager potential entrants to the market. A market definition must provide the numerator and the denominator in the fraction labeled "market share". *See* M. Handler, H. Blake, R. Pitofsky, H. Goldschmid, Cases and Materials on Trade Regulation 284-86 (Foundation Press 1975).

B.

The district court made findings as to price and cost of cephalosporins. It noted that, although competition between SmithKline and Lilly resulted in lowering the cost of cefazolin (Ancef and Kefzol) to hospitals, there has been no comparable reduction— or any erosion at all — in the price of Keflin. Prescribing physicians are not cost-conscious in their choices of an antibiotic for a hospitalized patient, and so do not opt for a less expensive over a more costly medication. The district court observed that it was estimated by Lilly that even a 50% reduction in the price of Keflin would not greatly increase Keflin's sales. Compared to other antibiotics in terms of cost per patient for a daily dosage, cephalosporins are very expensive; for example, injectable cephalosporins cost several times as much as injectable penicillin G, a widely used antibiotic which is often compared to the cephalosporins. Nevertheless, changes in the relative amounts of the cephalosporins and non-cephalosporins purchased by hospitals are not directly related to the relative costs thereof. During the period from 1966 through 1974, while hospital purchases 1064*1064 of cephalosporins increased by nearly 700%, hospital purchases of penicillin G decreased by nearly 60%. The district court noted that only the appearance of a new generation of anti-infectives to challenge the position of Keflin would effect a price reduction on that drug. Although such a challenge might have been forthcoming from the Ancef-Kefzol formula, the effect of Lilly's Revised CSP was to stifle that competition.

On the basis of the foregoing, we must conclude that the cephalosporins and non-cephalosporin anti-infectives do not demonstrate significant positive cross-elasticity of demand insofar as price is concerned. We therefore will not disturb the district court's conclusion that there is a lack of price sensitivity between cephalosporins and other antibiotics.

Regarding the interchangeability of cephalosporins and other anti-infective drugs, the district court found that, although there is a certain degree of interchangeability among all antibiotics, there are significant differences between groups in the areas of effectiveness and toxicity. Cephalosporins are considered more desirable by some physicians because they are broad spectrum anti-infectives, that is they are effective against a wider range of infectious organisms than are other antibiotics. In addition, cephalosporins are generally used in treating penicillin-allergic patients. Particularly significant in terms of practical

interchangeability is the fact that cephalosporins are effective against certain organisms where other anti-infectives are not, and vice versa.

The district court noted, for example, that cephalosporins are less toxic, *i. e.,* produce fewer undesirable side effects, than some other anti-infectives. In addition, unlike penicillins, cephalosporins are effective against the organism Klebsiella; they are also active against both staphylococci and gram negative bacilli, whereas penicillins tend to be active against one but not the other. These features can obviously be of great significance in the determination of the proper medication for a given patient. Thus, although there is a certain overlap in therapeutic capability, in the view of the district court, cephalosporins possess sufficiently unique features to warrant their characterization as a discrete product market, one lacking interchangeability with antibiotics in general.

By brief and at oral argument, Lilly placed great emphasis on a Hospital Disease Therapeutic Index (HDTI), a nationwide study of hospital-based physicians, describing actual use of antibiotics in treating hospitalized patients. This study purported to confirm that for virtually every purpose for which hospital physicians use cephalosporins, they also use other antibiotics. It scarcely need be commented that this was *evidence* presented at the trial, not a *fact* found by the factfinder. We do not conduct *de novo* fact findings on appeal, and will review evidence not with a view toward making our own findings but only to determine whether those of the district court are clearly erroneous, and we conclude that these are not.

The analysis of the district court comports with the standard for defining relevant market enunciated by the Supreme Court in *The Cellophane Case, supra,* and the elaboration of that standard offered by Justice Fortas in his *Grinnell* dissent, *supra.* Viewing this treatment against the standard of review mandated by the Supreme Court in *International Boxing Club, supra,* and *The Cellophane Case, supra,* we do not find the findings clearly erroneous.[4] Accordingly, we reject appellant Lilly's contention that the district court erred in its choice or application of the proper legal standards to test the market definition and 1065*1065 that the material facts as found were clearly erroneous. We therefore conclude that the relevant product market, the market where there is true economic rivalry because of product similarity, is that composed of cephalosporin antibiotics; there is neither appropriate interchangeability, price sensitivity, nor cross-elasticity of demand in the broader market of all antibiotics.

IV.

Having agreed with the court's definition of the relevant product market, we are now required to determine whether Lilly possessed monopoly power in that market, and if so, whether it was a willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident. *United States v. Grinnell Corp., supra.*

The Supreme Court has defined monopoly power as "the power to control prices or exclude competition", *The Cellophane Case, supra,* 351 U.S. at 391, 76 S.Ct. at 1005. Between 1964 and 1974, Lilly controlled from 100% to 89.8% of the cephalosporin market, and notwithstanding that its position in the market was originally the result of its patents, this

share is generally considered monopolistic. *See, e. g.,* *United States v. Grinnell, supra* (87% market share found to constitute monopoly.) The district court's characterization of Lilly as a monopolist is further buttressed by its fair measure of success in insulating Kefzol from true price competition with Ancef by means of its Revised CSP. The evidence demonstrates that Lilly's competitors did not have the actual or potential ability to capture a significant share of Lilly's business. The district court noted that Lilly's entrenched position as a supplier of cephalosporin, as well as the high costs of research and market development, made competition from a new entrant to the market unlikely.

V.

In sum, the act of willful acquisition and maintenance of monopoly power was brought about by linking products on which Lilly faced no competition—Keflin and Keflex—with a competitive product, Kefzol. The result was to sell all three products on a non-competitive basis in what would have otherwise been a competitive market for Ancef and Kefzol. The effect of the Revised CSP was to force SmithKline to pay rebates on one product, Ancef, equal to rebates paid by Lilly based on volume sales of three products. On the basis of expert testimony, the court found SmithKline's prospects for continuing in the cephalosporin market under these conditions to be poor.

With Lilly's cephalosporins subject to no serious price competition from other sellers, with the barriers to entering the market substantial, and with the prospects of new competition extremely uncertain, we are confronted with a factual complex in which Lilly has the awesome power of a monopolist. Although it enjoyed the status of a legal monopolist when it was engaged in the manufacture and sale of its original patented products, that status changed when it instituted its Revised CSP. The goal of that plan was to associate Lilly's legal monopolistic practices with an illegal activity that directly affected the price, supply, and demand of Kefzol and Ancef. Were it not for the Lilly's Revised CSP, the price, supply, and demand of Kefzol and Ancef would have been determined by the economic laws of a competitive market. The Revised CSP blatantly revised those economic laws and made Lilly a transgressor under § 2 of the Sherman Act.

The judgment of the district court will be affirmed.

[1] At the outset, SmithKline asserted claims for damages and injunctive relief, alleging that Lilly's marketing practices constituted: (a) a tying arrangement in violation of §§ 1 and 3 of the Sherman Act, 15 U.S.C. §§ 1, 3, and § 3 of the Clayton Act, 15 U.S.C. § 14; (b) monopolization in violation of § 2 of the Sherman Act, 15 U.S.C. § 2; and (c) abuse and misuse of Lilly's patents in violation of §§ 1, 2 and 3 of the Sherman Act, 15 U.S.C. §§ 1, 2, 3.

Following a non-jury trial the district court, in a meticulous and comprehensive treatment of the relevant facts and law by Judge Higginbotham, determined that liability exists only on the monopolization claim. 427 F.Supp. 1089 (E.D.Pa.1976). Pursuant to § 16 of the Clayton Act, 15 U.S.C. § 26, the district court entered a permanent injunction against those marketing practices of Lilly found to violate § 2 of the Sherman Act. A separate trial on the issue of damages has been stayed pending disposition of this appeal.

15 U.S.C. § 1, as amended, provides:

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal. Every person who shall make any contract or engage in any combination or conspiracy declared [by sections 1 to 7 of this title] to be illegal shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding one million dollars if a corporation, or,

if any other person, one hundred thousand dollars or by imprisonment not exceeding three years, or by both said punishments, in the discretion of the court.

15 U.S.C. § 2, as amended, provides:

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding one million dollars if a corporation, or, if any other person, one hundred thousand dollars or by imprisonment not exceeding three years, or by both said punishments, in the discretion of the court.

15 U.S.C. § 3, as amended, provides:

Every contract, combination in form of trust or otherwise, or conspiracy, in restraint of trade or commerce in any Territory of the United States or of the District of Columbia, or in restraint of trade or commerce between any such Territory and another, or between any such Territory or Territories and any State or States or the District of Columbia, or with foreign nations, or between the District of Columbia and any State or States or foreign nations, is declared illegal. Every person who shall make any such contract or engage in any such combination or conspiracy, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding one million dollars if a corporation, or, if any other person, one hundred thousand dollars or by imprisonment not exceeding three years, or by both said punishments, in the discretion of the court.

15 U.S.C. § 14 provides:

It shall be unlawful for any person engaged in commerce, in the course of such commerce, to lease or make a sale or contract for sale of goods, wares, merchandise, machinery, supplies, or other commodities, whether patented or unpatented, for use, consumption, or resale within the United States or any Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, or fix a price charged therefor, or discount from, or rebate upon, such price, on the condition, agreement, or understanding that the lessee or purchaser thereof shall not use or deal in the goods, wares, merchandise, machinery, supplies, or other commodities of a competitor or competitors of the lessor or seller, where the effect of such lease, sale, or contract for sale or such condition, agreement, or understanding may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

15 U.S.C. § 26, as amended, provides:

Any person, firm, corporation, or association shall be entitled to sue for and have injunctive relief, in any court of the United States having jurisdiction over the parties, against threatened loss or damage by a violation of the antitrust laws, including sections 13, 14, 18, and 19 of this title, when and under the same conditions and principles as injunctive relief against threatened conduct that will cause loss or damage is granted by courts of equity, under the rules governing such proceedings, and upon the execution of proper bond against damages for an injunction improvidently granted and a showing that the danger of irreparable loss or damage is immediate, a preliminary injunction may issue. . . .

[2] Although not affecting the disposition of this case, the record of the district court contains an inconsistency and so it is unclear whether Keflex and Kafocin were first marketed, respectively, in 1972 and 1971, or 1971 and 1970.

[*] 6 Months data.

[**] Dates in parentheses are dates of introduction.

[3] The district court found, and it is not disputed, that Lilly did not condition the availability of any of its products on the purchase of any other of its products or on the refusal of purchasing hospitals to deal with its competitors. Thus, Lilly did not "tie" purchases of Kefzol to purchases of Keflin or Keflex. We accept the decision of the district court that, in the absence of such a requirement, there is no illegal tie-in. Although sufficient to establish the offense of monopolization under § 2 of the Sherman Act, 15 U.S.C. § 2, Lilly's marketing scheme lacks the element of coercion necessary for liability under the theory of tie-ins. As stated by this court in *Ungar v. Dunkin' Donuts of America, Inc.,* 531 F.2d 1211 (3d Cir. 1976), *cert. denied,* 429 U.S. 823, 97 S.Ct. 74, 50 L.Ed.2d 84 (1976):

To prove a per se illegal tie-in, a plaintiff must establish three things. First, he must establish that the conduct in question was a tie-in: "an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or tied) product." *Northern Pacific Ry. v. United States, supra,* 356 U.S. 1 at 5, 78 S.Ct. 514 at 518, 2 L.Ed.2d 545 at 550. Second, he must establish that the seller "has sufficient economic power with respect to the tying product to appreciably restrain free competition in the market for the tied product." *Ibid.* at 6, 78 S.Ct. at 518. And third, he must establish that "a `not insubstantial' amount of interstate commerce is affected." *Ibid.*

Obviously, with respect to the first element, a formal agreement is not necessary, although it is sufficient. But, in the absence of a formal agreement, a plaintiff must establish in some other way that a tie-in was involved and not merely the sale of two products by a single seller. This can be done by proof that purchase of one product, the tied product, was not voluntary, i. e., by proof of coercion.

531 F.2d at 1223-24 (footnote omitted).

[4] As enunciated by this Court, findings are clearly erroneous only when they are found to be "completely devoid of minimum evidentiary support displaying some hue of credibility, or [bearing] no rational relationship to the supportive evidentiary data." *Krasnov v. Dinan, supra,* 465 F.2d at 1302. The district court's findings of fact with respect to the absence of price sensitivity between cephalosporins and other antibiotics, findings 38-48(a), bear a credible and rational relationship to the supporting evidence.