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ECONOMIC EFFECTS OF FEDERAL REGULATION OF MILK MARKETS*

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I. ORIGINS OF FEDERAL REGULATION

EXISTING federal control over the marketing of fluid milk is authorized by the Agricultural Adjustment Act of 1937.¹ This act permits the producers of milk eventually sold to the public as fresh milk, to impose marketing controls upon bottlers or dairies, or, in the language of the act, handlers, who market their milk to consumers or other dairies. A proposed marketing order is first presented to the handlers concerned for their signature and approval. However, if those handling most of the milk to be covered by the proposed order fail to sign, an order can nevertheless become effective if either two-thirds of the producers or producers of two-thirds of the output sold within the marketing area approve the proposal. In effect, milk producers can impose controls over the handlers.

Most of the major cities in the United States serviced by handlers who receive milk from producers in more than one state, that is, when interstate commerce is involved, now have federal milk marketing orders. The handlers that supplied milk to such cities as New York, Chicago, and Boston were regulated in the 1930's. By 1940, roughly twenty per cent of all milk shipped from farms passed through the plants of regulated handlers. This fraction rose to twenty-five per cent in 1950, and to about sixty per cent today. Federal controls over milk marketing by handlers spread very rapidly during the decade beginning in 1950. The absence of federal controls does not imply the absence of marketing controls; the handlers in many large markets such as San Francisco and Los Angeles are regulated by state controls.

* It is my melancholy duty to acknowledge the assistance which I received on the legal aspects of milk regulation from Mr. Robert M. Schuchman, whose death while holding a law-economics fellowship at the University of Chicago was a serious loss to scholarship. It had been hoped that it would be possible to publish some of Mr. Schuchman's writings on this question, but unfortunately they had not reached a sufficiently developed form to enable this to be done. The research on which this article is based has been supported by Ford Foundation funds made available by the School of Business of the University of Chicago.

¹ 7 U.S.C. § 601-624 (1964); 50 Stat. 246 (1937). This act replaced legislation first passed in 1933 and revised in 1935.

Before federal marketing legislation was enacted, farmers supplying markets such as Chicago, Boston, and New York bargained, through their cooperatives, with handlers over the price to be paid for their milk. Almost invariably, they bargained for a two-price system with a relatively high price to be paid for milk to be resold as fresh milk, and a lower price to be paid for milk used in manufacturing butter, cheese, and other manufactured milk products.² Competitive forces often operated to erode away all price differences between milk for manufacturing and fluid use other than those accounted for by cost differences. Fluid milk dealers could find milk producers who would sell their milk at or about what it was worth in manufacturing. Despite the willingness of producer groups to employ milk strikes and violence, two-price systems before the advent of governmental support were unstable and hence produced instability in milk prices to producers and handlers.

As a result of alternation in the determinants of milk prices to producers, with monopoly pricing alternating with price determination by competitive forces, the market for fluid milk was regarded by milk producers as lacking in "order." The suppliers of milk to large urban markets regarded the frequent breakdowns in the two-price system as socially undesirable and described the transition from monopoly to competition as chaotic. They argued that milk strikes and the associated violence and price instability (caused by their efforts to maintain discriminatory pricing for their output) constituted an undesirable consequence of the presence of competition. Unable to eradicate competition privately, they attempted and ultimately succeeded in enlisting the support of governments to suppress competition.³

With the advent of the Great Depression and a change in the willingness of the community to accept economic controls, milk producers who supplied large urban markets strongly supported and won legislation that would substitute government for private power as a means of maintaining classified pricing. The purpose of this legislation has been described in a report to the Secretary of Agriculture by the Federal Milk Order Study Committee as follows:

"1. To promote orderly marketing conditions for farmers specializing in

² See Cassels, *A Study of Fluid Milk Prices*, (1937), for a history of efforts to organize the milk markets in our major cities before the advent of federal marketing controls.

³ Although producer groups experienced difficulties in maintaining classified pricing, efforts to win governmental support were relatively weak until the 1930's. During the Great Depression, it became more difficult and costly to privately enforce classified pricing. Consequently milk producers intensified their efforts to obtain support for discriminatory pricing from both state and federal governments. See Harris, *Classified Pricing of Milk* 27 (U.S. Dep't of Agriculture Tech. Bull. No. 1184, 1958); and U.S. Federal Milk Order Study Committee, *Report to the Secretary of Agriculture* 8 (Dec. 1962). [Hereinafter cited as Report.]

the production of fluid milk and thereby improve their income situation at least in the long run;

2. To administer and supervise the terms of trade in defined milk markets in such manner as to equalize the market power of buyers and sellers and attain reasonable competition but not local monopoly resulting in undue price enhancement;

3. To assure customers that they will have access to adequate and dependable supplies of high-quality milk from the sources best suited both technologically and economically to supply these demands;

4. To complement the efforts of milk producers' organizations to maintain economic order in their industry, and to bring about the coordination of price structures and market practices within and between marketing areas, between fluid and manufacturing segments of the dairy industry, and between milk production and other lines of farming;

5. To secure equitable treatment of all parties—producers, dealers and consumers, not only within each local or regional market but throughout the system;

6. To establish such terms of trade under the orders as will combine maximum freedom of trade with proper protection of established producers against seasonal or other loss of outlets that would tend to demoralize markets and farming plans.”⁴

Why should these farm organizations have bargained for such a complex system that involves patently difficult problems of auditing and policing? Indeed, why should they have any interest at all in the end products which are to be produced out of the raw material they supply? Two classes of answers to this question appear in the literature. One explains this behavior in terms of consumer interests. If consumers are to be assured of a supply of fresh milk throughout the year, then the prices of milk eligible for bottling must be higher than milk eligible only for manufacturing since milk for bottling must satisfy more costly sanitary standards. If a supply of fresh milk is to be assured, then there will be a surplus of milk eligible for bottling that goes into manufacturing. The milk eligible for bottling that goes into manufacturing will be no more valuable than milk ineligible for bottling. Consequently higher prices must be charged for milk that is resold as fresh milk. The other class of answers implies that producers are pursuing their own interest to the detriment of consumers. “Price classification was designed primarily to obtain higher returns for producers.”⁵ Fluid milk is more expensive to transport than manufactured milk products. It weighs

⁴ Report at 12.

⁵ Report at 17 n.1.

much more per dollar of product at the source, and it is more difficult, that is, more expensive, to handle because of its perishability and differences in sanitation requirements among communities. Hence fluid milk markets are naturally more isolated from one another than the markets for manufactured milk products. Under competition, butter and cheese prices would vary less, from one part of the country to another, than milk prices. Consequently it is easier for a producer group to control the supply of fresh milk in a market than to control manufactured milk products. These economic considerations, quite apart from any legal restraints on interregional trade, suggest that it is easier to monopolize fresh milk markets than it is to monopolize the markets for manufactured milk products. Hence the adoption of classified pricing by producers supplying a particular market can be rationalized as being a consequence of, on the one hand, a negatively sloping demand curve for fresh milk and, on the other, an infinitely elastic demand curve for milk to be used in manufacturing, since the market for manufactured milk products is national if not international. "Products locally manufactured from excess milk supplies do not enjoy the same protective advantages afforded the less concentrated products, and are sold in markets of national scope."⁶

The purpose of this study is to answer the questions: What are the economic effects of these controls? Do they increase the cost of milk to consumers? Are they in the economic interest of all dairy farmers? How have they affected the efficiency with which resources are employed?

II. THE CONTROL MECHANISM

The Agricultural Adjustment Act of 1937 provides that the producers of fresh milk who normally supply a "marketing area" can enlist the support of the Agriculture Department to work out an "orderly" method of marketing their output. The Department of Agriculture will, if the producers can show that a two-thirds majority desire federal help in marketing their products, appoint a federal milk marketing administrator who will administer the marketing agreement which is referred to as an order. The principal function of the administrator and his staff is to enforce the marketing order. This entails a great deal of auditing of the accounts of handlers. Handlers are taxed by the order to pay the costs of administering a market order. The budget for the Chicago order in 1965 was approximately one-half million dollars.

There are no federal controls over the prices and selling policies of dairies or bottlers that are members of an order. It is the buying practices of dairies with respect to their major input, milk, that is regulated. The federal milk market

⁶ Report at 19. Also see Report at 20.

administrator sets, monthly, minimum fresh and manufacturing milk prices that dairies must pay at a specified location or base. (In Chicago, this base is City Hall.) Since dairies typically haul the milk they buy from the country to their plants, the milk market administrator also sets what are termed zone differentials, that is, discounts from the base price to be paid for milk acquired by dairies in the country. In Chicago, for example, these discounts are a function of the distance between the points at which dairies pick up their milk, and City Hall.

The milk marketing administrator also computes what is known as the blend price. This is a weighted average of the prices paid for manufacturing and fresh milk. It is what a particular handler, in a market-wide pool, pays his suppliers. In addition, handlers have financial relations with a producers' settlement fund, which is managed by the milk marketing administrator. A handler pays into the fund if his fluid utilization of milk is greater than the over-all utilization for the entire market. Conversely he receives from the fund if his utilization is below the market average. Hence it is a matter of indifference to any individual producer, in a market-wide pool, whether or not his milk is utilized as fluid milk or turned into butter. As long as he sells to a regulated handler, he must receive the blend price. For the Chicago order in 1966, milk sold to dairies to be resold as fresh milk was priced at about \$4.24 per hundredweight by the order administrator. In contrast, identical milk used in manufacturing butter, cheese, and dried skim milk was priced at about \$3.20. The receipts of each producer in an order are the product of his output and the blend price.

Since the end of World War II, milk market administrators have had very little choice in pricing manufacturing milk. Most of the time, the government has been actively supporting the butter, cheese, and skim milk markets. Hence if manufacturing milk is to be sold, it must be priced at its value in producing manufactured milk products to be sold to the federal government. In effect, the demand for milk to be used for manufactured dairy products has been virtually infinitely elastic at its imputed value in the production of butter and cheese for sale to the government.⁷

III. THE WORKING OF THE SYSTEM

Presumably under competition milk of like grade and quality would bring the same price in a market, and therefore the price paid for milk to be resold

⁷ See U.S. National Commission on Food Marketing, Technical Study No. 3: 286 (1966). [Hereinafter cited as Organization.] CCC expenditures for butter have averaged about a quarter of a billion dollars per year in the last ten years. See Table 3-2, *id.* at 38. "In the summer of 1961, the large accumulation of butter stocks threatened to over-run the available storage facilities." See Spencer, Development of the Federal Milk Order System as Related to National Supplies and Surpluses of Milk, 1947-1963, 1 (Cornell Univ. Dep't of Agricultural Econ., Agricultural Econ. Research Bull. No. 162, 1965).

as fresh milk ought to approximate the value of similar milk used in butter production. The word approximate is used because grade B milk, which is milk produced under less rigid sanitary standards, can be used to produce butter but not fresh milk, and grade B milk is somewhat cheaper to produce.⁸ However, this difference is small and for the purposes of analysis can be ignored. Hence the most important difference between an unregulated and a regulated market is the price paid for milk that is subsequently resold as fresh milk. Maintaining prices for milk to be used for fluid purposes that are higher than manufacturing milk prices, and higher than the cost difference associated with differences in sanitary standards for grades A and B milk, is the *raison d'être* for marketing orders.

The foregoing analysis implies that one of the major effects of federal milk order regulation, as contrasted with an absence of regulation, is higher prices to handlers for milk to be resold as fresh milk. Therefore, one ought to be able to observe systematically lower prices in nonregulated markets. Unfortunately, the buying prices of unregulated handlers are difficult to come by because so few cities of any size are unregulated. Moreover, handlers have relatively little incentive to divulge this information. Indeed, if anything, the incentives are probably the other way.

A recent study of the geographic pattern of milk prices by a member of the Department of Agriculture utilized one hundred and thirty-three observations of prices that were classified in four categories: federal order markets, state regulated, federal and state regulated, and unregulated. For the period studied, July, 1960 to June, 1961, there were twenty-four independent observations of unregulated markets, and seventy-six of purely federal order markets. These one hundred observations were pooled and the prices regressed on distance from Eau Claire, Wisconsin, the heart of the milk producing center on the Wisconsin-Minnesota border. In the absence of a systematic difference between unregulated and federally regulated order markets, prices in unregulated markets ought to be randomly distributed

⁸ Milk that goes into the fresh milk market must meet higher sanitary standards than milk used for manufacturing. To the extent that these differences in sanitary standards are associated with differences in costs of production, the foregoing statements should be qualified. In fact, the marginal costs of meeting fluid sanitary standards are not easy to come by; sanitary standards for manufacturing milk vary from state to state.

There has been a steady increase in the fraction of milk produced that is eligible for Class I use. In 1950, only 39 per cent of the country's milk was grade A. By the end of 1965, the fraction eligible for grade A had risen to 61 per cent. In Wisconsin, the grade A manufacturing price differentials have been averaging approximately 35 cents per hundred pounds. However, at this differential there has been a dramatic conversion from grade B to grade A, and it is clear that the differential at which there would be no conversion is substantially smaller than 35 cents. See Graf, *Economic Outlook for One Grade of Milk*, presented at the Thirteenth Annual Dairy Manufacturing Conference, University of Kentucky, Dec. 1, 1965.

"Producer conversion from a manufactured milk to a market milk basis is relatively inexpensive and rather quickly accomplished." Report at 57.

about the regression line. In fact, the following pattern of the distribution of residuals was found:

DISTRIBUTION OF RESIDUALS			
	+	—	Totals
Unregulated	8	16	24
Regulated	43	33	76
	51	49	100

$A = 3.70$ (.0602); $B = .163$ (.00763); $R^2 = .823$ where A is the constant term and B is the regression coefficient.

The high frequency of regulated markets and low frequency of unregulated markets among the observations with positive residuals is difficult to rationalize as the workings of chance. Application of the X^2 test indicates significance at a level of five per cent for a two tail test.

When regressions are run on distance from Eau Claire for each of the markets, for the regulated and the unregulated, the regression lines appear to be roughly parallel with a lower intercept for the unregulated market. The constant term for the unregulated markets was 3.53 (.1612) and 3.76 (.0575) for the regulated. The regression coefficients were .157 (.00747) for the regulated—dollars per hundred miles—and .175 (.0191) for the unregulated markets. Eighty-six per cent of the observed variance was explained by the first equation and seventy-nine by the second.⁹ These findings lead to the question: Should the observed difference in constant terms, twenty-three cents, be attributed to chance? The answer is unclear; there is a probability of about twenty-eight per cent of a difference as large as twenty-three cents occurring by chance.¹⁰

In the 1964-65 study by Lasley of the relationship between prices and transportation costs, there were only eight unregulated markets. These were:

Springfield, Illinois
 Eau Claire, Wisconsin
 Bemidji, Minnesota
 Winona, Minnesota
 Jacksonville, Florida
 Galveston, Texas
 Houston, Texas
 Cheyenne, Wyoming

⁹ These data were obtained through personal communication with Floyd A. Lasley, the author of *Geographic Structure of Milk Prices, 1964-65*, (U.S. Dep't of Agriculture Economic Research Service No. 258, 1965).

¹⁰ The test used is described in Lehmann, *Testing Statistical Hypotheses* 172 (1959). A two tailed test was used. For the slopes, the probability of the difference being significant was about one-quarter.

The Springfield price was 4.09 against 4.26 for Chicago, although Springfield is roughly one hundred miles further from the producing center. The Bemidji and Winona prices were 3.55 and 3.68 respectively against 4.13 and 3.99 for Duluth and Saint Paul respectively. Saint Paul and Winona are approximately the same distance from Eau Claire. The Eau Claire price was the lowest price observed, 3.53. Other Wisconsin prices were 4.20 for Madison and Milwaukee, and 3.75 for Green Bay. The other prices in the unregulated markets seemed to be roughly equal, after adjusting for distance, to the regulated prices.¹¹

IV. THE EFFECTS OF THE SYSTEM

Given that federal milk orders utilize a two-price system for the same product, then it can be shown that orders lead to an increase in milk output. Under competition, there would be a single price for milk eligible for fluid use and a somewhat lower price for manufacturing milk. In the long run, the difference between these two prices would reflect differences in production costs. In the short run, this price difference would be demand determined. If the suppliers of milk eligible for fluid use organize an order, then they can, given demand inelasticities, increase total receipts by increasing the fluid milk price. Consequently the blend price for a given output must exceed the single price formerly charged. Under orders, output decisions are made individually and blend price will equal marginal costs. Consequently output must rise above the level formerly produced under competition, and the quantities supplied by order producers to the manufacturing milk market must increase. Hence the institution of orders implies an increase in milk output, a fall in the amount supplied to the fluid market, and an increase in the amount offered for use in the production of manufactured milk products.¹²

A two-price system of orders, given no controls over the output decisions of individual producers, with each producer accounting for a small fraction of order output, implies that every order producer will produce some milk that is sold at prices below marginal costs of production. If output decisions are based on blend prices and milk is in fact sold at the manufacturing milk

¹¹ The difference between producer prices in regulated and unregulated markets has implications for retail prices in these markets. These implications are examined in the Appendix.

¹² Presumably, under competition, a certain fraction of milk eligible for fluid use would go into manufacturing. However, the foregoing conclusion still holds as long as demand for fluid use is inelastic and the price of fluid is increased. "[W]here the milk supplies excluded from regulation under the Federal order for the major market were left unregulated, the producers often received flat prices as high or higher than the uniform prices determined under major order. Nevertheless, the net cost to the handler of milk used in his fluid sales was nearly always less than he would have had to pay for Class I milk under an order." Report at 38.

price, then it follows that the replacement of competition in the supply of milk with federal orders produces a system that induces farmers to produce milk individually and collectively at a cost that exceeds the price at which this milk is jointly sold. The foregoing is illustrated by Figure I.

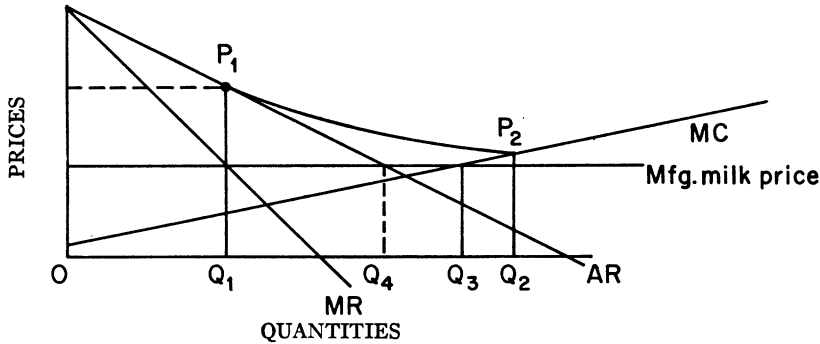


FIGURE I. Optimal Outputs and Prices for Orders

The equilibrium conditions for a marketing order are:

1. Blend price must equal marginal cost.
2. Marginal revenue must be equal in both markets.

The latter condition implies that marginal revenue in the fluid market must equal the manufacturing milk price. The demand for manufacturing milk is assumed to be infinitely elastic because (1) a single order produces a small fraction of all manufacturing milk used, and (2) the government has been, during most of the post World War II years, supporting the manufacturing milk market through its purchases of butter, cheese, and dried skim milk. The intersection of the marginal revenue curve (MR) for the fluid milk market and the demand curve, which is of course also a marginal revenue curve, for manufacturing milk, determines the optimal price and output for the Class I market whose demand curve is depicted by AR. At the optimal price P_1 in the fluid market, there exists the beginning of a locus of points $P_1 P_2$, which becomes asymptotic to the demand curve for manufacturing milk products, that describes the blend prices associated with various total outputs (Q_1 being sold in Class I and the remainder in the Class II market). The equilibrium blend price is determined by the first equilibrium condition, that blend price equal marginal costs (MC). This occurs for output Q_2 and blend price P_2 . At blend price P_2 , Q_1 is supplied to the Class I market, $Q_1 Q_2$ to the Class II market. Output $Q_3 Q_2$ is produced at out-of-pocket costs in excess of the receipts derived from the sale of this output; this loss is described by the triangle bounded by P_2 and the demand curve for milk for manufacturing. The amount that would have been produced under competition is Q_3 and the

amount supplied to the fluid market Q_4 and to the manufacturing milk market Q_4Q_3 .

To the extent that order producers increase their output over what would be produced under competition, they depress the price of manufacturing milk. Hence non-order producers receive lower prices for their manufacturing milk than would otherwise be the case. Orders operate to keep the price of manufacturing milk down and hence increase the support purchases of manufactured milk products by the government. Needless to say, they also operate to depress the incomes and outputs of non-order producers below what they would be if order producers operated in a competitive world.

From this analysis, it follows that the replacement of competition by federal milk market orders can be viewed as a negative sum game. It clearly operates to the detriment of the non-order producers as a class, and to taxpayers because it increases the support purchases of manufactured milk products. It produces economic inefficiencies because it induces order producers to produce some output at marginal costs that are in excess of marginal revenues, raises the prices of fluid milk above its true economic costs and, if anything, lowers the prices of milk for manufacturing below its economic costs. Only the order producers can possibly gain from this game. Consequently, insofar as one of the objectives of orders is to help all milk producers, it more than fails in this objective; it makes the producers of almost one-half of all milk worse off.

From the point of view of the consumer, federal orders raise the prices of fresh milk and fresh milk products relative to manufactured milk products. Abstracting from the support program for manufactured milk products, competition instead of federal orders would lead to lower prices for fluid milk vis-à-vis manufactured milk products, lower absolute prices for fluid milk products, and raise manufactured milk prices. In general, the federal order program increases the prices of what many regard as a "necessity," fluid milk, and decreases the prices of "luxuries" such as ice cream, cheese, and butter. Possibly the only exception to the foregoing is the price of dried skim milk which is lowered by the support program.

The behavior of milk prices in central Illinois, before the advent of regulation, constitutes an important piece of evidence that market forces, in the absence of federal, state and private controls, can provide the consumer with a steady supply of fresh milk at prices as low or lower than the prices that would have existed under federal controls. Clearly the consumer of fluid milk is not the beneficiary of federal marketing controls and consumer interests are not the cornerstone of the explanation of the existence of these controls; for the consumer, competition does at least as well, if not better.

Classified pricing with no production controls over the output of order producers leads them to produce more for the manufacturing milk market

than they would under competition. However, federal milk market administrators, in setting the Class I price, can influence the amount offered by these producers. If they are willing to lower Class I prices, they can reduce output. Milk market administrators have an unambiguous criterion by which they can evaluate whether or not their Class I prices are too high or too low. This is the output of milk eligible for Class I use that in fact goes into manufacturing. If the key factor in the pricing of Class I milk is "to assure customers that they will have access to adequate and dependable supplies of high quality milk," then prices should be decreased to reduce surpluses and conversely (subject of course to the constraint that Class I prices do not fall below manufacturing milk prices).

What are the facts? Nationally, Class I surpluses have been rising since the end of World War II. It is clear that there exists an upward trend in the size of surpluses, as can be seen from Table 1. However, one may argue that, with the expansion of orders, a more relevant criterion is the fraction of Class I milk that is surplus, not the absolute amount. Since the end of World War II, the fraction utilized in Class I has been about two-thirds of the milk delivered by order producers. Over this same period, Class I order prices have generally risen relative to manufacturing milk prices.¹³ They are from 35 to 100 per cent. higher than manufacturing milk prices.¹⁴ The decrease in utilization caused by the relative rise in Class I prices has been roughly offset by the expansion of federal price control orders in such areas as Texas, which until the advent of orders did not provide all of the milk sold as Class I from the output of local producers. Hence, the expansion of the federal order program has operated to increase measured utilization for all owners collectively. With respect to the older orders such as those in New York, Chicago, and Boston, there has been a downward trend in utilization. Since Class I prices have been secularly rising relative to manufactured milk prices, it follows that federal milk marketing administrators have set prices that increase surpluses and decrease utilization.¹⁵

The view that orders increase milk surpluses, which can be defined as milk that is sold to the government in the form of manufactured milk products, has not been accepted by many experts on milk marketing. Spencer concludes his study of the effects of orders upon surpluses with the statement: "The findings of this study indicate, however, that federal orders have been a relatively minor factor in the rapid growth of commercial supplies and

¹³ Report at 32 and at 72-73, n.8.

¹⁴ Organization at 41.

¹⁵ The effect of bringing in orders to replace competition has been to increase permanently local output. Typically the increase in output has been greatest in the years immediately following the launching of an order. With the spread of orders in the 1950's and 1960's, this country has become regionally more self-sufficient with respect to its milk supplies. Report at 93-94.

national surpluses of milk."¹⁶ Elsewhere he states: "This analysis disclosed no significant relationship between the importance of federal order markets as outlets for milk in the various states and the rate of increase in farm sales of milk during the seven years 1957-1963."¹⁷ Spencer's data, however, suggest somewhat different conclusions. Table A2 in the Appendix, which

TABLE 1
MEASURES OF GROWTH IN FEDERAL MILK ORDER
MARKETS, SELECTED YEARS, 1947-65

Year	Mar- kets ^a	Hand- lers ^a	Pro- ducers ^b	Order Producer Deliveries				Class I Surplus
				Volume	Used in Class I	Used in Class I	Of all Milk Sold to Plants and Dealers	
				Millions of Pounds	Millions of Pounds	Per Cent	Per Cent	Millions of Pounds
1947	29	991	135,830	14,980	9,808	65.5	21.2	5,172
1950	39	1,101	156,584	18,660	11,000	58.9	25.1	7,660
1955	63	1,483	188,611	28,948	18,032	62.3	31.8	10,916
1960	80	2,259	189,816	44,812	28,758	64.2	43.2	16,054
1962	83	2,258	186,468	51,648	31,606	61.2	46.7	20,042
1963	82	2,144	176,477	52,860	32,964	62.4	47.6	19,896
1964	77	2,010	167,503	54,447	33,965	62.4	47.6	20,482
1965 ^c	73	1,891	158,118	54,446	34,559	63.5	47.9	19,887

^a End of year.

^b Average for year.

^c Preliminary.

Source: U.S. National Commission on Milk Marketing, Technical Study No. 3: Organization and Competition in the Dairy Industry, at 41.

appears in Spencer's paper, clearly indicates that the growth rate of farm sales of whole milk delivered to order markets was, on an annual basis, greater than it was for the output of whole milk delivered to all markets. Another table, A3, also reproduced in the Appendix, indicates that the states with the greatest increases in farm sales of milk and cream had a relatively high fraction of milk going to federal order plants and conversely. The data contained in this table convinced Spencer that "the degree of dependence upon farm separated cream as a market for milk had much more influence upon the trend of farm sales of milk and cream than did the importance of federal order plants in the two groups of states represented in the foregoing tabulation."¹⁸ By eliminating the states (nine) in which farm sales of cream were

¹⁶ Spencer, *supra* note 7 at 20 & 22.

¹⁷ *Id.* at 20.

¹⁸ *Id.* at 18-20.

important, Spencer was able to produce a table that indicated an increase in farm sales of milk unrelated to the presence of federal orders. (This is Table A4 which is also reproduced in the Appendix.)

The major difficulty with Spencer's analysis is his failure to regard farm sales of cream as responding to weaker price incentives than farm sales of whole milk. Since orders do not cover farm separated cream, virtually all farm separated cream bought by processors is converted to manufactured milk products. Hence the elimination from his data of farm separated cream constitutes the elimination of evidence unfavorable to his thesis.¹⁹

For Chicago, the fraction going into Class I use was approximately 56 per cent in 1947, 55 in 1951, 52 in 1955, 46 in 1959, 39 in 1964, and 45 in 1965. Chicago had the dubious distinction of being the order market with the largest fraction of its output going into manufacturing. Hence the price paid for Class I milk in Chicago was probably further away from equilibrium than in any other market. Given the evidence on the spreads between dealer costs of milk and prices to consumers, it is highly likely that the costs to consumers attributable to the absence of competition are greater for Chicago than any other midwestern city, and possibly any other large city in the United States.

Federal orders lead to the creation of two classes of producers: order and non-order producers. The order producers have a fluid milk market to exploit and, in the process of exploiting it, produce more milk that is ultimately used in manufacturing than would be true in the absence of orders. The non-order producers do not have fluid milk markets to exploit and hence sell their milk for manufacturing without the benefit of a blend price; it is sold at the prevailing manufactured milk price which, for most of the post-war period, has been the value of milk in producing butter and cheese to be sold to the government at the support prices for these commodities.

Minnesota, Wisconsin, and, to a lesser extent, Iowa have a strong comparative advantage in milk production. Minnesota and Wisconsin produce roughly a quarter of all of the fluid milk produced in the United States. These three states produce over one-half of all the butter, cheese, and dried skim milk produced in this country. Obviously, these states and the upper midwest generally have a comparative advantage in milk production for any purpose. Federal orders clearly depress the price of milk used in manufacturing and consequently induce a lower level of production on the part of non-order producers. Since Wisconsin, Iowa, and Minnesota producers are over-represented among non-order producers, it follows that federal orders induce the milk producers with a comparative advantage in milk production to

¹⁹ The last column in Spencer's table reproduced in the Appendix as Table 2 should reflect changes in farm sales of milk in all forms, both whole and cream. What is essentially being compared is the change in incentives to produce milk generated by orders vis-à-vis the dairy support program.

contract their output and those with a comparative disadvantage to expand. In general, orders work to the disadvantage of the upper midwest and to the advantage of the rest of the country. With the spread of orders, the relative position of the milk producers of the upper midwest has deteriorated.

Between 1946 and 1964, the milk output of Iowa, Minnesota, and Wisconsin producers, as a fraction of all output, increased from 26.6 to 28.5 per cent. In contrast to this increase, the receipts from the sale of milk by producers in these states, as a fraction of all receipts from the sale of milk, declined from 25 to 23 per cent. The output of milk in Iowa declined in absolute terms while the output of milk in Minnesota and Wisconsin sharply increased.²⁰ Because of the comparative advantage in milk production of Minnesota and Wisconsin, their Congressional representatives have typically been more sympathetic to free interregional access to milk markets than one would predict from the positions taken with respect to other economic issues. Ideology and economic interests seem to be correlated. As a consequence of the conflict between free trade milk states and protectionist states, federal regulation dealing with milk marketing has represented a compromise between these two interest groups; both could agree that the consumer should be exploited; however, they have differences of opinion as to who should do the exploiting. By contrast, state regulations serve the interests of local producers only.²¹

The reduction in the output of efficient producers and the increase by inefficient producers engendered by federal order markets has been exacerbated by the way orders have been administered. The Department of Agriculture has favored local producers over non-local producers in the administration of the law to such an extent that the Department has been overruled by the Supreme Court in one important instance to be discussed. In administering the law, the federal milk market administrators have operated to isolate order handlers from outside competition. To the extent that such competition has been reduced, local monopolies in the distribution of milk have been encouraged. Transportation and location differentials, pool plant requirements, allocation requirements and compensatory payments have all been used to keep

²⁰ Presumably land used for milk production in Iowa has alternative uses not available to owners of land used for milk production in Wisconsin and Minnesota. Why the share of Minnesota and Wisconsin milk in total output increased is more difficult to explain. Clearly, relative price effects dictated a decrease. Did the comparative advantage of these two states in milk production increase over time?

²¹ Prices also seem to be higher in state regulated markets than in federal markets. For twenty-two state controlled markets in the 1960-61 study by Lasley, the regression on distance from Eau Claire yielded a constant term of 6.01 (.708), and virtually none of the observed variance was explained; the pattern of prices least resembled those of a free market. The same conclusion appears in Hammond & Christiansen, *Marketing Minnesota's Dairy Products: Characteristics, Problems, and Needs* 35 (Minn. Agricultural Experiment Station Misc. Rep. No. 63, 1965).

out "foreign" milk and protect local producers. Compensatory payments have also protected local handlers. In addition, milk market administrators have tolerated, if not encouraged, super-pool premiums which have increased already swollen surpluses of Class I milk.²²

Federal milk market administrators set up a series of concentric zones around the point chosen as the base, and the price paid by dairies depends upon the zone in which milk is picked up by the dairy. The greater the distance from the base, the lower the price paid. These zone differentials are presumed to reflect transportation costs, and, if they correctly reflected transportation costs, would equalize the cost of milk to handlers irrespective of the location of the producer from the base. In fact, zone differentials inadequately reflect transportation costs. The costs of picking up milk from distant producers usually exceed the difference between the base price and the price paid, and this difference increases with distance from the base. Consequently dairies, given these set differentials, have an incentive to buy their milk from close-in producers.

This practice is rationalized on the grounds of economic efficiency. Milk market administrators argue that they do not want handlers to be indifferent between buying from close-in and from distant producers. They want handlers to buy from close-in producers in order to minimize transportation costs. This is probably the only appeal to economic efficiency made by the Agriculture Department in justifying the regulations of milk market administrators. Its use is clearly a piece of economic sophistry.²³ Presumably there exists a set of zone differentials that will lead to the employment of land in the base zone as pasture; transportation costs would be at a minimum if cows were pastured on land surrounding dairies. In fact, economic efficiency would be better, but far from perfectly, served, if zone differentials reflected transportation costs; if in fact processors were indifferent about the location of their producers. Under these circumstances, social costs which in this instance are transportation plus production costs would be lower than they are under the system employed. With the present arrangement, farmers are induced to substitute uneconomically high priced close-in land for land further from the base.

However weak the case for zone differentials that fail to depict transportation costs, it is infinitely stronger than the case for location differentials. These constitute payments to close-in producers from the producers' settlement fund simply because they are close-in producers. These payments, which are a function of the volume of milk delivered by producers eligible for these payments, are made from the producers' settlement fund and are deducted from the gross receipts of the order before computing blend prices.

²² Report at 24.

²³ *Id.*

Hence location differentials depress blend prices, and favor producers close to the market at the expense of those farther away. Clearly they operate as a deterrent to far-out producers vis-à-vis close-in producers in supplying fluid milk for an order market. Both location and zone or transportation differentials favor one class of milk producers at the expense of another class. These nearby differentials, or location differentials, have existed in many important markets such as Chicago, New York-New Jersey, Connecticut, and other New England orders. In many of the New England orders, nearby differentials are paid on two-thirds to ninety per cent of the milk delivered, and blend prices are depressed by thirty to forty cents per hundred-weight.²⁴

These differentials are rationalized as an attempt to reproduce the competitive market. Under competition, it has been argued, nearby producers would get more for their milk than distant producers, apart from differences in transportation costs, because of more desirable seasonality, earlier and more dependable arrival at city plants, easier and more economical supervision of producers, etc.²⁵ This argument, apart from its validity, is a strange defense since the rationale for the existence of orders is that competition produces undesirable results because it pits one producer against another. Yet this defense says the outcome of this undesirable process should be reproduced by regulators.

The rationale presented for the existence of location differentials is quite independent of the reason for their existence. Presumably when orders were being organized, close-in producers were somewhat reluctant to pool their milk with more distant producers, since under competition, apart from transportation costs, they would receive a higher price for their product. Consequently, in order to win the consent of the close-in producers for orders, concessions in the form of location differentials were presumably bartered for their political support in organizing orders.

In addition to lowering the prices of the output of manufacturing milk producers through equating marginal production costs with blend prices, order producers have erected barriers to the admission of non-order producers to milk market orders that are above and beyond the location differentials and inappropriate zone differentials. These barriers are erected because order producers have an interest in high utilization and hence high blend prices. In contrast, non-order producers have an interest in becoming order producers in order to increase their revenues by the difference between manufacturing milk prices and blend prices. Hence, non-order and order producers are constantly engaged in a form of covert warfare through their representa-

²⁴ Report at 74-75.

²⁵ *Id.* at 75.

tives in the halls of Congress and elsewhere.²⁶ Manifestations of this conflict are pool plant requirements, allocation provisions and compensatory payments.

Pool plant requirements constitute a condition for admission to the privilege of having a producer's output pooled and priced under an order. In order to qualify, a producer must have his output move through a plant that has some specified fraction of its milk used for fluid purposes, often during a particular part of the year. (In Chicago, pool plant requirements were twenty per cent, which is relatively low.) Often in order to qualify, producers will, insofar as it is possible to do so and not violate order regulations, absorb processing costs in order to induce regulated handlers to purchase some of their output. Close-in producers have objected to this practice on the grounds of economic inefficiency; milk is hauled uneconomically long distances in coming to market.

What happens when a handler buys milk from producers or from plants whose producers are not eligible to share in an order market? Order administrators have viewed this behavior with horror and have used allocation provisions and compensatory payments to discourage such purchases. Virtually all orders have at one time or another had allocation provisions. These provide that if a handler buys milk from unregulated sources, he must allocate all milk from regulated sources to fluid use before he can pay more than the manufacturing milk price for the unregulated milk. Hence, if any milk from regulated sources is used in manufacturing, then the maximum price that can be paid unregulated milk is the manufacturing milk price. If the most a handler can pay is the manufacturing milk price, then virtually all incentive is eliminated for the sale of such milk by unregulated sources to order handlers.

Compensatory payments deal with the problem of a handler whose sales in a regulated market constitute a relatively small fraction of his total sales. If such a handler is regulated as an order handler, then his producers become eligible for participation in pooling. This would be to the detriment of other order producers because it would lower utilization. However, if such a handler is not regulated with respect to the price he pays for milk, then order handlers may be at a disadvantage. An unregulated handler might be able to buy milk at a lower price than regulated handlers. To solve this problem, unregulated handlers selling in order markets are assessed the difference between fluid and

²⁶ There is also a conflict of interest within an order between the near-in and far-out producers with the near-in producers trying to oust the far-out producers from the order in an effort to raise utilization. Some analysts have attributed to such a conflict the dissolution of the Chicago order which had an unusually low utilization. They believe the object of the dissolution is to eliminate far-out producers through preventing their entry in a subsequent order. If they are eliminated, blend prices would increase and the near-in producers would be better off.

manufacturing milk prices on their sales in the order market regardless of the price actually paid.

Assessing unregulated handlers for the difference between manufacturing and fluid milk prices for all milk sold in an order market regardless of the price in fact paid, led to the famous Lehigh Valley case,²⁷ and the ruling that the Agriculture Department had exceeded the powers Congress delegated in the Agricultural Adjustment Act. The plaintiffs were handlers with plants in Pennsylvania, who bought most of their milk from farmers located in Pennsylvania, and sold most of their output in Pennsylvania. One, Lehigh Valley, was regulated by the Philadelphia order; the other, Suncrest, was unregulated. One of the plaintiffs had sold its milk in the Phillipsburg area of Northern New Jersey for twenty-two years before this case arose, the other for ten years. Both paid prices for milk that were equal to or higher than the Class I (fluid milk) prices set by the New York-New Jersey order.

In an order effective August 1, 1957, the Secretary of Agriculture extended the area of the New York order to include Northern New Jersey, bringing Phillipsburg and the surrounding area into a federal order for the first time. Under the terms of this order, Lehigh Valley and Suncrest became subject to regulation as a consequence of their sales in the Phillipsburg area. Lehigh Valley was ineligible to join the New York-New Jersey order since it already belonged to the Philadelphia order and more of its sales were in the Philadelphia order market. Suncrest found it unprofitable to join the New York-New Jersey order, assuming it could satisfy pool plant requirements, because most of its milk was bought and sold in Pennsylvania. If Suncrest joined the New York-New Jersey order, it would have to pay to the producers' settlement fund of that order the difference between blend and Class I prices on its fluid sales, and would have to pay Pennsylvania minimum prices to its producers. Hence, it would have higher fluid milk costs than competitors in all markets served.²⁸

The rationale for the extension of the New York order into New Jersey is straightforward. Northern New Jersey produced and bottled less milk than it consumed.²⁹ Hence, the expansion of the New York order would drive out of the market the dairies that supplied this area insofar as they paid prices for fluid milk in excess of the manufactured milk price. As a result of compensatory payments, handlers who did not have plants in the original or expanded area but supplied the area incidental to supplying other markets would be effectively precluded from this market. For the producers already under the New York order, the addition of Northern New Jersey to

²⁷ *Lehigh Valley Cooperative Farmers, Inc. v. United States* 370 U.S. 76 (1962).

²⁸ Record, vol. 1 at 10a, 46a-50a, 86a-88a, 117a-118a, 244a-254a, 285a, 304a-311a, *Lehigh Valley Cooperative Farmers, Inc. v. United States*, 370 U.S. 76 (1962).

²⁹ *Id.* at 372a.

the order added more fluid milk consumption than production, hence utilization would rise. Consequently, both the handlers and the producers under the New York order could gain from this expansion at, of course, the expense of other handlers and producers.

Clearly, the experience in Northern New Jersey indicates that until the overthrow of compensatory payments by the Lehigh Valley case in 1962, the Agriculture Department administered milk market orders in a way that isolated handlers supplying a given market from the competition of handlers that primarily supplied other markets. Hence the orders served more than the interest of order producers; it also isolated regulated handlers from some of the hazards of competition. Compensatory payments constitute at least a partial explanation for the rapid expansion of orders and provide an economic rationale for a community of interest between producers and handlers.³⁰

In recent years, in approximately one-third of the federal order markets, the price paid for milk by handlers has not been fixed by the federal milk market administrator. Order producers have been permitted to negotiate prices in excess of the price set by the milk market administrator. The difference between prices determined by milk marketing administrators and the prices actually negotiated are called superpool premiums. These premiums varied from 2 to 35 cents per hundredweight in 1965.³¹ Presumably Congress in enacting this legislation was dissatisfied with the results of negotiations between handlers and producers and set up an umpire to provide "fair prices" for both handlers and producers. If this function is surrendered, then much of the rationale for the existence of orders disappears. The role of the federal milk market administrator, under these circumstances, is to use the power of the government to enforce prices that he had no direct role in determining.³² The willingness of handlers to pay superpool premiums is related to the probability that they will have to compete with handlers who can obtain milk at lower costs. Consequently, insofar as handlers are isolated from competition with handlers outside the local markets, the formation of superpool premiums is encouraged.³³

³⁰ Growth of limited access, high speed interstate highways since the end of World War II helped break down the natural isolation of fluid milk markets and appears to be a very important explanation for the spread of orders.

³¹ Hammond & Christiansen, *supra* note 21 at 36.

³² Presumably in the absence of orders and with competition, superpool premiums would not exist. And zone differentials that inadequately reflect transportation differentials encourage producers to seek superpool premiums. Consequently, insofar as orders replace competition, superpool premiums must be attributed to the existence of orders.

³³ Before the dissolution of the Chicago order, handlers did not have to pay superpool premiums on milk they bought that was to be sold to handlers outside the local market for bottling. The rationale for this discrimination is demand elasticity. Milk going outside the local market often must meet more competition. As a consequence of this discrimi-

V. THE FOOD AND AGRICULTURE ACT OF 1965

The Food and Agriculture Act of 1965³⁴ enables the Department of Agriculture to set up orders that, in principle, could more effectively exploit the monopoly position of the suppliers of milk under an order. In fact, powers delegated by this new legislation have yet to be utilized in the administration of an order. Consequently, what would occur if these powers were utilized must rest on economic analysis and estimates of how this law will be administered.

The key provision of this legislation deals with the inefficiencies caused by milk producers utilizing blend prices to make their output decisions when their marginal milk was in fact sold at the manufacturing milk price. This legislation assigns market rights to producers to sell Class A milk in a particular market. Presumably, rights will be issued for an output equal to Class I sales at the order price. In the absence of these market rights, milk will be sold by producers at the best price they can get, which will be the manufactured milk price; the blend price is effectively eliminated as a determinant of output. As a consequence, the manufactured milk price should rise as a result of the decline in the output of order producers. Hence, this legislation will make the manufacturing milk producers of the midwest better off. Order producers will stop producing milk at costs in excess of manufacturing milk prices, and they also will be better off.

In contrast to the producers of manufactured milk products of the midwest, the producers of manufactured milk products in the east will be worse off.³⁵ The costs of milk to eastern producers will rise relative to those of the midwest, if Class I production quotas are established. Federal milk orders have stimulated the growth of a manufactured milk industry in the east as a result of the surplus of milk eligible for Class I use that is diverted to manufacturing. These new manufacturing milk processors were induced to enter this activity by the order policies for selling surplus Class I milk. Often this meant prices to processors for milk to be used in manufacturing that were as much as twenty cents per hundred pounds less than the comparable Minnesota price.³⁶ The present Secretary of Agriculture, when he was Governor of Minnesota, felt so strongly about these surpluses, and the manufacturing milk industry they induced, that he advocated amending the Agricultural

nation, a Saint Louis handler could buy milk in Chicago for less than the price paid by a Chicago handler for milk to be resold locally.

³⁴ 79 Stat. 1187 (1965).

³⁵ Between 1946 and 1963, butter production in New England and New York increased by a factor of four while butter production in Minnesota, Wisconsin and Iowa increased by a factor of about two. Needless to say, this increase in the output of butter was not in response to the wishes of consumers; during this period per capita butter consumption fell by a factor of one-third.

³⁶ Hammond & Christiansen, *supra* note 21 at 34.

Adjustment Act of 1937 in order to bring down Class I prices relative to manufacturing milk prices.³⁷ He argued:

We think that it is plain that the New York consumers' payments of high Class I prices constitute, in effect, a subsidy to the New York milk manufacturers in the form of unduly low manufacturing milk costs, and with no advantages to the New York dairy farmers whose blend price is being pulled down by the low manufactured price.³⁸

If the rights to sell Class A milk in order markets are negotiable, then trade barriers to interregional sales of milk will be reduced, if not eliminated. Assuming these rights can be freely bought and sold, then their value would be greatest in the hands of those milk producers who can supply milk to a given market at the lowest cost. Consequently, the negotiability of these rights can improve the economic position of all milk producers, and presumably will lead to the expansion of output by producers of the upper midwest for the fluid market and a contraction in the output of present order producers associated with an increase in their net worth.

With respect to the taxpayer, the provisions of the Food and Agriculture Act of 1965 imply that smaller quantities of manufactured milk products will have to be bought by the CCC for any specified level of support prices than would be the case under the legislation of 1937. With respect to the consumer, the implications of the new legislation are less straightforward. Insofar as handlers are no longer protected from the pressures of competition, there would be a gain. However, what will happen to Class I prices is another matter. If surpluses of Class I milk operated as a brake upon Class I prices, then this brake will be removed and Class I prices will be increased. It would seem that, if anything, fluid milk consumers will probably be worse off as a result of this legislation. Insofar as marketing monopolies by dairies are removed, they will gain. But against this gain must be put the adverse effects of higher prices for milk to bottlers and higher prices for manufactured milk products.

V. SUMMARY

In summary, present legislation constitutes class legislation. It favors the suppliers of fluid milk markets and injures the suppliers of milk for manufacturing. The proliferation of orders following World War II led to an increase in the supply of milk for manufacturing as a result of the use of blend prices in making output decisions by order producers. Consequently,

³⁷ Hearings on Investigation of Dairying before the Subcomm. on Dairy Products of the House Comm. on Agriculture, 84th Congress, 1st Sess., Ser. GG, at 443 (1955).

³⁸ *Id.* Class I prices have continued to rise relative to manufacturing milk prices since Freeman took office.

the higher prices obtained by fluid market suppliers were associated with lower prices for manufacturing milk suppliers. The economic gains of the fluid milk suppliers are considerably smaller than the economic costs incurred by society as a result of orders.

Orders constitute a monopolistic pricing arrangement that produces, not too small, but too large, an output. Typically, monopolists have marginal costs that are less than the price at which their marginal output is sold; the economic costs of monopoly arise because output is too small. In contrast, order producers sell their marginal output at prices below marginal costs. Hence, some of their gains in monopolizing the fluid milk market are dissipated in excessive production of milk at costs that exceed marginal returns. Consequently, if the output of order producers were reduced, the resources relinquished could be used to produce goods and services whose market value would exceed the value of the milk in fact produced.³⁹ One method of achieving this objective is the replacement of orders with competition. Another is to establish Class I production quotas and sell all other milk at the market, and this is apparently the purpose of the Food and Agriculture Act of 1965.

APPENDIX

The data on prices to producers cited suggested that the retail prices in towns whose handlers are unregulated ought to be lower than they are in Chicago, abstracting from transportation costs. Presumably, unregulated handlers are able to buy their milk for less than regulated handlers. By how much less is a more difficult question. The maximum difference is roughly seventy-five cents per hundredweight. The Springfield-Chicago price differential suggests that this advantage is about twenty-five cents per hundred pounds or a half cent per quart. Illinois is one of the few states with cities of any size whose handlers until recently (December, 1966) have been uncontrolled. These cities exist in the middle of the state. They are bordered on the north by the Chicago and Rockford orders, and on the south by the St. Louis order. This area, uncontrolled until December, 1966, contains the towns of Danville, Champaign, Bloomington, Peoria, Springfield, and Decatur.

The retail prices of milk in stores that are parts of chains operating in Chicago and in these cities were obtained. These stores were the A & P, Kroger, and Eisners. Eisners is part of the Jewel chain in Chicago. The prices are tabulated below.

The prices in the unregulated cities are, if anything, too low relative to those observed in Chicago to be explained by differences in raw milk prices to handlers. The most the difference in raw milk costs could account for is one-half cent per quart. Moreover, there are considerable economies of scale in bottling plants and the trend has been toward larger plants. Hence, if anything, plant processing

³⁹ The fact that the CCC has been an important buyer of this milk only strengthens this conclusion. Presumably the resale price of milk by the government is less than its purchase price.

RETAIL MILK PRICES, CHICAGO & CENTRAL ILLINOIS*

		Quarts	Half Gallons	Gallons	Half Gallons 2%
(1, 2, 3)	Chicago	26	47	89	45
(1)	Decatur	21	40	77	37
(3)	Decatur	22	38.5	69	31.5
(2)	Springfield	23	37.5	69	36.5
(3)	Champaign	23	43	79	33.3
(2)	Champaign	22	39.5	79	38
(2)	Danville	22	43	73	41
(2)	Bloomington	23	42.5	72	37
(1)	Peoria	25	39.5	75	36.5
(3)	Peoria	25	39.5	75	37

1. Kroger
2. Jewel
3. A & P

* Observed November 12, 1965. Prices in cartons.

costs would be smaller in Chicago. These results indicate that more than a difference in dealer costs of milk is being detected. The fact that the Eisner chain downstate carries Dean's milk, the same brand carried by Jewel in Chicago, and that this milk came from the Chicago-area Dean's plant does nothing to weaken the impression that what has been uncovered cannot be entirely explained by the absence or presence of federal orders. Dean's is fully regulated under the Chicago order and hence must pay the minimum order price for milk that is shipped downstate.

There exists other evidence that suggests that marketing margins are relatively high in Chicago. This evidence is summarized below.

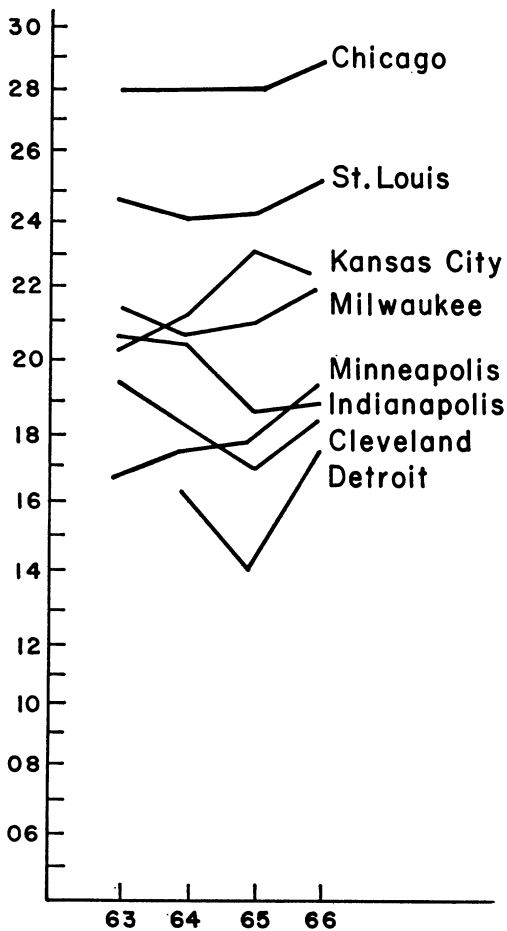
AVERAGE FARM PRICES AND TOTAL MARKETING MARGINS ON WISCONSIN FLUID MILK SOLD IN SEVEN MARKETS, 1951-54

	Wis. Farm Price	Total Marketing Margin on Sales Through Retail Stores	Total Margin on Sales in Home Delivery Basis (cents per quart)		
			Single Quart Containers	Two Quart Containers	Discount Basis
Chicago	9.09	13.06	15.67	15.17	13.61
Milwaukee	9.47	10.14	10.75	10.22	9.63
Oshkosh	9.00	10.28	10.28	8.80	8.62
Beloit	9.39	12.00	12.00	10.81	8.66
Kenosha	9.42	11.36	11.30	10.81	10.30
Madison	9.69	10.40	10.86	10.46	9.33
Minneapolis	9.13	8.53	11.54	—	9.25

Source: Wisconsin Legislative Council, *Report of the Special Joint Committee on Dairy Prices Spreads to the 1955 Legislature* 2089 (June, 1955). [Assembled at the direction of the Committee by the staff of the Legislative Council.]

The foregoing data are consistent with the differentials between retail prices and dealers' prices for major midwest cities covered in the Fluid Milk and Cream Report of the Department of Agriculture in recent years. The data, for the cities of Detroit, Cleveland, Indianapolis, Milwaukee, Minneapolis, Kansas City, St. Louis and Chicago, are summarized in Chart A. They clearly show Chicago with

Chart A.
Average Annual Margin Per Half-Gallon
Whole Milk, Chicago and Other Cities
1963-1966, in Cents



Source: Fluid Milk and Cream Reports, U.S. Department of Agriculture

the largest distribution margins, approximately three cents per half gallon higher than the closest competitor, St. Louis.

A noteworthy property of the retail prices of milk in Chicago, as compared with other major midwestern cities, that probably is related to the size of the spreads observed in the preceding table, is the relative stability and small range in retail prices reported. Typically, for half gallons of milk sold in cartons by stores, the Agriculture Department reports a range of observed prices for a metropolitan area; for Chicago only a single observation has been reported. (These observations reflect prices in major chains.) Moreover, if one uses the mean of the ranges when several observations are reported, the month-to-month variations in Chicago prices are lower than they are for other major cities in the midwest.

Other observers have found similar evidence of high marketing costs in Chicago. The marketing margins for nine cities (Chicago, Denver, Detroit, Los Angeles, Louisville, Miami, Minneapolis, St. Louis, and Washington, D.C.) are compared for half gallons of milk sold by stores. The price paid to farmers as a fraction of the retail price is lowest, and the absolute size of the difference between dealer costs for milk and retail prices the greatest for Chicago. The ratios ranged from 36.6 to 57.4 per cent, and the absolute difference from .166 to .298 cents.¹

Another piece of evidence suggestive of unusually large margins is the practice of "stop buying."

In Chicago secret discounts of up to 11% and secret payments to secure an account of up to \$50,000 have been proved in cases brought by the federal government.²

Such an observation is suggestive of efforts to evade price restrictions.

Still another anomaly of the Chicago market is the failure of prices either to dealers or on the retail level to fall since the abandonment of federal control in Chicago at the end of June in 1966. The evidence presented suggests that dealer buying prices should drop with the abandonment of federal regulations. All this evidence points to the existence of price restrictions other than governmental.³

¹ See U.S. National Commission on Food Marketing, Technical Study No. 3: Organization and Competition in the Dairy Industry, Table 14-1 at 194 (1966). Wages in Chicago were highest for three of four categories of workers employed by dairies that were also reported in this table.

² Wisconsin Legislative Council, Report of the Special Joint Committee on Dairy Price Spreads to the 1955 Legislature, 2089 (June 1955). [Assembled at the direction of the Committee by the staff of the Legislative Council.]

³ Prices in downstate Illinois towns, which became regulated in December of 1966, continue to be lower than Chicago prices despite the fact that they are farther from Wisconsin. One could also observe price variations among major chains in the same town downstate and "sales," that is, temporary price cuts, which are not observed in Chicago.

TABLE A1
FEDERAL ORDER MARKETS: NUMBER OF MARKETS, PRODUCER MILK IN CLASS I, AND
TOTAL RECEIPTS FROM PRODUCERS. ANNUAL DATA FOR THE YEARS 1947-1963

Year	Number of markets (end of year)	New orders issued	Producer milk in Class I		Total receipts from producers		
			Million pounds	Percentage of nonfarm consumption	Million pounds	Percentage of	
						production	farm sales*
1947	29	1	9,808	24.3	14,980	12.8	21.2
1948	30	1	9,852	24.6	15,020	13.3	21.8
1949	33	3	10,104	24.9	17,049	14.7	23.3
1950	39	6	11,000	26.4	18,660	16.0	25.1
1951	44	7	12,718	29.7	20,117	17.5	27.0
1952	49	5	14,672	33.6	22,998	20.0	29.8
1953	49	1	15,436	34.6	25,896	21.5	30.6
1954	53	4	16,172	35.1	27,140	22.2	30.9
1955	63	10	18,032	37.7	28,948	23.5	31.8
1956	68	5	19,615	39.7	31,380	25.1	32.9
1957	68	3	21,339	42.5	33,455	26.8	34.0
1958	74	6	23,309	46.3	36,356	29.5	36.5
1959	77	6	26,250	52.0	40,149	32.9	39.8
1960	80	3	28,758	56.5	44,812	36.4	43.2
1961	81	4	29,859	59.4	48,803	38.9	45.1
1962	83	3	31,606	61.8	51,648	41.0	46.7
1963	82	0	32,968	63.2	52,868	42.4	47.6

* Receipts from producers at federal order plants as percentage of all whole milk sold by farmers to dealers and plants.

Sources: Market order data: From reports of the Dairy Division, Agricultural Marketing Service, U.S. Department of Agriculture.

Data on milk production, farm sales of milk to dealers and plants, and nonfarm consumption of fluid milk and cream: From reports of the Statistical Reporting Service, U.S. Department of Agriculture, Milk-Production, Disposition, and Income, (Statistical Bulletin No. 282, 1961) and the annual report for 1962-1963 (April 1964).

TABLE A2
 PERCENTAGE INCREASES FROM YEAR TO YEAR IN RECEIPTS FROM PRODUCERS
 AT FEDERAL ORDER PLANTS, IN ALL MARKETS AND IN COMPARABLE
 MARKETS: ALSO YEAR TO YEAR INCREASES IN U.S. FARM
 SALES OF MILK TO DEALERS AND PLANTS, 1950-1963

Years	Number of markets		Percentage increase of receipts from producers at federal order plants		Percentage increase of U.S. farm sales of whole milk to dealers and plants
	All markets	Comparable markets	All markets	Comparable markets	
1950-1951	44	22	7.8	0.2	0.4
1951-1952	49	24	14.3	4.8	3.8
1952-1953	49	33	12.6	10.9	9.4
1953-1954	53	35	4.8	3.9	3.9
1954-1955	63	37	6.7	2.8	3.5
1955-1956	68	40	8.4	4.5	5.0
1956-1957	68	40 (41)*	6.6	6.4 (1.6)*	2.9
1957-1958	74	40 (41)*	8.7	2.4 (0.2)*	1.4
1958-1959	77	45	10.4	2.7	1.2
1959-1960	80	49	11.6	3.9	3.0
1960-1961	81	58	8.9	5.3	4.2
1961-1962	83	67	5.7	2.9	2.2
1962-1963	82	68	2.4	1.3	0.4
Averages:					
1950-1956			9.1	4.5	4.3
1957-1963			7.8	3.1 (2.6)*	2.2
1950-1963			8.4	3.9 (3.5)*	3.2

* New York-New Jersey, by far the largest of all federal order markets, was not included among the comparable markets for 1956-1957 and 1957-1958 because its marketing area was expanded substantially in 1957. If New York-New Jersey were included for those years on the basis of estimated receipts and Class I disposition excluding the effect of expansion, the percentage increases would be as indicated by the bracketed figures.

Sources: 1. Producer receipts at federal order markets: Derived from data compiled by the milk Marketing Orders Division, Agricultural Marketing Service, U.S. Department of Agriculture.

2. Farm sales of milk to plants: Derived from reports of the Statistical Reporting Service, U.S. Department of Agriculture. Milk-Production, Disposition and Income, (Statistical Bulletin 282, 1961) and annual report for 1962-1963 (April 1964).

Note: Comparable markets include all which operated under federal orders throughout each 2-year period and whose marketing areas were not changed significantly during that time.

TABLE A3

Item	Averages for 5 states with greatest increases in farm sales of milk and cream	Averages for 5 states with decreases in farm sales of milk and cream
Percentage increase or decrease in farm sales to dealers and plants	29.3	-10.0
Percentage of all farm sales of milk and cream that went to federal order plants	39.7	22.4
Cream sales by farmers as percent- age of total farm sales of milk and cream	1.1	35.9

TABLE A4
INCREASE OR DECREASE IN FARM SALES OF MILK TO PLANTS, 1957 TO 1963, IN
STATES GROUPED ACCORDING TO THE PERCENTAGE OF ALL FARM SALES
OF MILK THAT WAS DELIVERED TO FEDERAL ORDER PLANTS

Percentage of total farm sales of milk to plants that went to federal order plants, 1960		Number of states	Percentage increase in farm sales of milk to plants, 1957 to 1963	
Range	Average		Simple average (per cent)	Weighted average (per cent)
Less than 20	2.1	10	21.2	15.9
20-49	38.5	11	8.1	5.6
50-69	61.1	9	9.6	11.1
70 and over	88.3	9	8.0	12.0
All groups		39	11.8	10.3

Note: States in which farm sales of cream (in milk equivalent) to plants in 1957 were 20 per cent or more of total milk and cream sales to plants, also the new states of Alaska and Hawaii; have been excluded from this tabulation.

- Sources: 1. Percentage of farm sales of whole milk delivered to federal order plants, by states: from Federal Milk Order Market Statistics, Supplement for 1961 to Statistical Bulletin 248. Dairy Division, Agricultural Marketing Service, U.S. Department of Agriculture, November 1962.
2. Farm sales of milk and cream to plants: from reports of the Statistical Reporting Service, U.S. Department of Agriculture, Milk-Production, Disposition and Income, (Statistical Bulletin No. 282, 1961) and the annual report for 1962-1963 (April 1964).