The Fate of Federal Milk Marketing Orders: Is Order 135 an Indication of the Future?

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Department of Agricultural Economics and Rural Sociology Moscow, Idaho 83844-2334 THE FATE OF FEDERAL MILK MARKETING ORDERS:

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Introduction

"In theory, theory and practice are the same, in practice they're not"—Yogi Berra Federal Milk Marketing Orders (FMMO) were established in the Agricultural Marketing Act of 1937. They were designed to reduce/eliminate the effects of milk pricing wars generated by processors who essentially had monopsony power when buying milk from producers as a result of seasonal production (Stillman; Kessel; Ladd; Blayney and Normile). More generally, Masson and Eisenstat indicate that orders were to provide: (a) orderly marketing, (b) an adequate supply of milk, and (c) an increase in farmers' incomes. In practice, the establishment of the FMMO order system allowed a classified milk pricing system and dictated the minimum prices processors had to pay for milk associated with an order. The FMMO system still has its proponents, while others believe the FMMO has too many problems and has outlived its usefulness (Marsh; Schiek). Some believe the system provides benefits besides classified pricing. "These include reducing price uncertainty for buyers and sellers, reducing, if not eliminating, incentives for destructive competition, and providing a framework to encourage rational and orderly marketing behaviors and outcomes" (Novakovic). However, these potential benefits do not come without a cost. Several authors have outlined these costs (Buxton; Dahlgren; Ippolito and Mason; Kessel; Ladd; McDowell, Fleming, and Fallerts). The outcome of these studies indicate that prices paid by consumers and revenue received by producers are generally higher as a result of the FMMO system. However, the majority of these results are more than 20 years old and do not reflect recent structural changes in the industry, changes that could potentially alter the outcomes of these evaluations. Some of the important changes that have occurred in the last 20 years include the following (Manchester and Blayney):

1. Improved transportation which has facilitated the shipment of milk.

- 2. Refrigeration which allows milk to be safely shipped long distances from where it was produced.
- 3. Fewer dairy farm operations.
- 4. Increased size and concentration of dairy operations.
- 5. A shift in the use of milk from fluid products to products, especially cheese, which can easily be stored and readily shipped.
- 6. Consolidation of milk handling and processing operations (coöps, handlers, manufacturers, etc.).

Some of the more recent work such as that by Blayney and Normile, Price, and Helmberger and Chen have shown results that are similar to the older studies. But as Blayney and Normile note, "Because milk marketing orders—both Federal and State—have been in effect for so long, it is difficult to determine the extent to which these characteristics would emerge in the absence of FMMO's." There continue to be proposals that would alter or eliminate the FMMO system, but little analysis of these alternatives exist. Seibert et al. indicated in 1997 that sweeping changes

were needed in the FMMO system as a result of

... the views held by producers and handlers that the present system has major flaws. Perceptions of advantages and disadvantages given to some at the expense of others, particularly on a regional basis have lead to protracted debate. The multifaceted character of this debate has pitted dairy farmer against dairy farmer, dairy farmer against handler, handler against handler and even economist against economist Without industry cohesiveness, it is conceivable that an impasse could be reached resulting in elimination of FMMO's, at least in some areas of the county, as early as April 1999.

While no order was eliminated as early as these authors predicted, on April 1, 2004 a major¹

order was terminated -Order #135.

¹A reduction in the number of orders occurred on January 1, 2000, but this did not involve termination of an order. At least one other order (Chicago) had been terminated in the past but no termination was as large, in terms of the volume of milk, as Order #135.

Termination of Order 135

Several factors contributed to the termination of Order #135. Two of the major factors are briefly outlined below.

On January 1, 2000, the Great Basin order (#138), which included Utah, SE Nevada, eastern Idaho, and western Wyoming was combined with the SW Idaho and eastern Oregon orders (former Order # 135) in 2000 to form the new western order (see figures 1 and 2). This combination was the result of directives given in the 1996 farm bill to reduce the total number of milk marketing orders. The new order combined an order that had relatively high class I utilization (Great Basin) with an order that had one of the lowest levels of class I (fluid milk) use in the nation (SW Idaho-eastern Oregon)—see figure 3. As a result, pooled milk in the new order shifted producer revenues from producers in the former Great Basin order to producers in SW Idaho-eastern Oregon. Most producers in the Great Basin order viewed this new pooling as an administrative "taking" of something that was rightfully theirs. The straw that figuratively "broke the camels back" occurred in late 2003 when the producer price differential (PPD) became negative for several months (figure 4). This change was blamed on the new order. As a result, when the vote was taken concerning proposed changes² in the order, the changes were not supported and Order #135 was terminated.

²The factors indicated above were not the only ones that affected the vote. The key issue was associated with pooling provisions, but the vote of producers in Utah (the block vote by DFA) was pivotal.

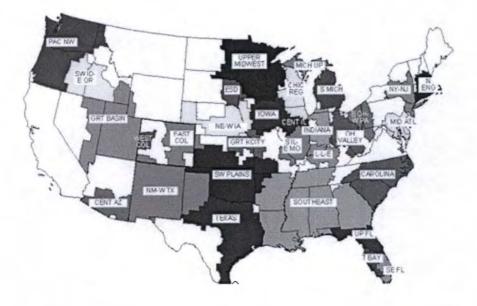
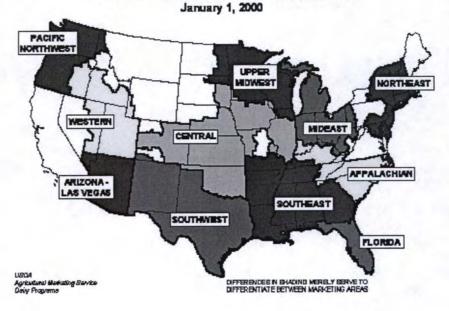


Figure 1. Federal milk marketing orders before 1 January 2000.



FEDERAL MILK MARKETING ORDER AREAS

Figure 2. Federal milk marketing orders in 2000.

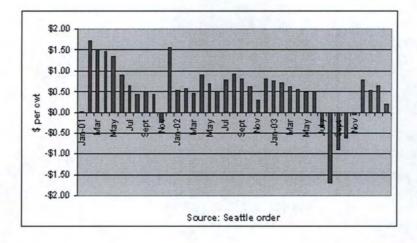


Figure 3. Percent class I utilization on Great Basin and SW Idaho orders, 1997-1999.

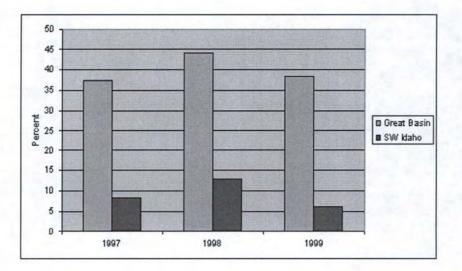


Figure 4. Producer price differential for Order #135, January 2001-March 2004.

What Have We Learned?

Seibert et.al. outlined ten functions of a FMMO and suggested what would happen if a

FMMO was terminated. These included the following:

- 1. Minimum classified milk prices and minimum component prices would no longer exist. As a result, they also suggested that:
 - a. milk prices would become a greater point of competition amongst handlers as well as producers and their cooperatives
 - b. prices would change more frequently
 - c. returns to producers would decline
- 2. There would be no uniform blend prices
- 3. There would be no specified regional price differentials, zone prices, transportation credits, or market wide service payments
- 4. No timely payment enforcement
- 5. No compensatory payments
- 6. No milk payment audits
- 7. No enforcement of standards regarding accurate milk component testing and weights
- 8. No audits for compliance regarding fund payments
- 9. Loss of data
- 10. No administrative hearing process.

These consequences, as well as others, are outlined and evaluated below.

Administrative and Regulatory Functions

Consequences 4, 6, 7, 8, and 10 are all functions that relate to the regulatory or

administrative functions of a marketing order. The loss of these functions may become important in the future, but at this point in time they are generally not viewed by producers as major losses or consequences of the termination of Order #135. One of the fears of termination of a FMMO is that there is no longer an independent entity that ensures that the market still functions (payment enforcement, audits, standards). While these may be valid concerns, there is no evidence that any problems of this type have occurred since Order #135 was terminated. It also should be noted that some of these functions can be handled by other entities (e.g., state agencies) and that handlers not meeting industry standards for testing or who do not comply with the distribution of fund payments would be subject to legal action (suits by producers and/or industry organizations).

The benefits of a hearing process were eliminated for producers in Order #135, but some costs were also eliminated. These include the costs of market administration and the burden of the producer settlement fund. As a result, administration has been shifted from government to the market.

Milk Prices and Data

The remaining consequences outlined by Seibert et al. involve prices and pricing issues.

Loss of Data (Consequence #9)

One of the significant things that did happen with termination of the order was the loss of public information about prices and production.³ Data on milk utilization by class of use, volume, prices, and similar data no longer exist as part of a public record. When Order #135 was in existence, data on prices paid to producers (at least the minimum's specified by order administration) were readily available. In fact, essentially every milk handler used the federal order guidelines and regularly paid the minimum prices suggested. There was essentially no difference in the prices paid to a producer when producers had the same components (percent

³The exception is information published by USDA's National Agricultural Statistics Service (NASS) for the dairy industry where Order #135 was terminated.

butterfat, protein, other solids, somatic cell counts, etc.).⁴ With termination of the order, these data are no longer available to the general public. As a result, data were collected about milk handlers by the authors. In Utah a set of producers provided on of the authors (Godfrey) with monthly milk checks (usually a minimum of two producers for every processor) for most of the milk handlers⁵ in the state since April 2004. Milk price data for producers in Idaho were obtained by the other two authors (Stockton and Gray) for some of the largest milk handlers in Idaho. In some cases data were provided directly by these firms, but in other cases data were obtained from producers for some processors.

Uniform Pricing (Consequences 2, 3, and 5)

A FMMO requires that every milk handling firm (exceptions are made for cooperatives) within an order has to pay at least the minimum prices specified by the market administrator of that order. This allows all producers in the order to share the benefits irrespective of where the milk is produced or its end use (fluid, cheese, etc). With termination of Order #135, blending of prices (consequence #2), regional differentials (consequence #3), and compensatory payments (consequence #5) are no longer formal considerations in setting prices paid to producers. These may occur as noted below but they are on a firm-by-firm basis. As a result, one would expect prices to vary between milk processors or handlers.

The data obtained from producers in Utah and Idaho after termination of Order #135

⁴The price received by every producer depends on the quality/components produced. Producers also have differences in deductions associated with dues, marketing costs, and transportation. As a result, the mailbox price (net price received after all deductions, discounts, and premiums are accounted for) is the most valid measure of milk price received by a producer.

⁵Data for one of the handlers were provided by the firm and not from the producers who sold to that firm.

clearly show that there has been a divergence in the prices paid to/received by producers since termination of the order. For example, Godfrey has shown that if identical milk (components and deductions for hauling, advertising, promotion, dues, etc., are equal) was sold to the six processors in Utah and if 200,000 pounds of milk was sold each month, the difference in revenue between the six handlers would be over \$30,000 for the period 1 April 2004 through 1 April 2005.

Many of the handlers in Utah continue to use FMMO prices for each class of milk but PPDs are no longer uniform. The PPD⁶ was commonly uniform for all handlers before the order was terminated, but now each firm apparently⁷ determines the PPD they use based on what classes of milk that firm sells. As a result of differences in the prices paid by handlers, there is considerable interest by some producers to seek a handler who pays a higher price as suggested by Seibert et al. As predicted, this has strained the relationship between many producers who have historically sold to the dominate coöp in Utah (Dairy Farmers of America or DFA).

Price Decline

Most authors, including Seibert et al., have predicted that the prices paid to producers would decline if an order was terminated. There is no evidence that this has generally occurred following the termination of Order #135. The prices paid by some processors may have declined relative to the prices that would have existed had the order remained because there was no sharing of class I revenues. But given the low levels of fluid milk utilization (percentages were

⁶The producer price differential (PPD) is basically how much the value of handler receipts over the market area exceeds the class III price of milk (Jesse and Cropp).

⁷There is no information concerning how these are determined.

generally in the teens) in this area, class I utilization was not a major contributor to higher average prices. This is especially true in months when negative PPDs resulted in lower prices than would have existed had producers been paid just for cheese (class III prices)—negative PPDs were common for processors who have retained the FMMO pricing guidelines and use plant level PPDs.

Less than one year after Order #135 was terminated, many of the processors in both states changed the way prices were determined. Many of the handlers in Utah and Idaho only produce cheese. As a result, the prices they pay are based on cheese yields using national cheese prices—NASS or CME prices for cheese, somatic cell (SCC) count, and whey prices are the key variables.

Several authors who have evaluated the FMMO system have emphasized the point that there is a difference in the price elasticity between fluid and manufactured milk products and that producer revenues can be increased as a result of these differences. If milk is restricted for fluid milk use (relatively inelastic) and increased for manufactured milk products (inelastic but more elastic than it is for fluid milk), producer revenues can be increased. Furthermore, these authors suggest that producer revenues would eventually decline without an order as a result of shifting milk from one use to the other. But no empirical evidence has been found that indicates that milk handlers purposely shift milk from fluid to manufacturing products in an effort to take advantage of the possible differences in the elasticity of demand in these two general areas of the market. In fact, to the contrary, prices paid by some handlers who emphasize fluid milk in the terminated order have increased the prices paid to producers. These processors could have paid more than the minimum prices when the order existed but were not required to do so.

In addition, policies of the milk marketing boards (state orders) in Montana and Nevada require that minimum prices be paid for milk used for fluid consumption. Higher prices and reduced sales would be emphasized if shifting between uses was allowed instead of the requirement to pay a minimum price. This suggests that processors in these two states were not shifting use from fluid to manufactured products in an effort to capture revenues associated with differing elasticities. In addition, most of the advertising sponsored by the dairy industry (e.g., "got milk" and "got mustache" campaigns) emphasize increased sale of fluid milk. Furthermore, retailers often feature milk with reduced prices, as a "loss leader," to induce consumers to come to their store. This suggests that most of the inefficiencies attributed to the FMMO may be theoretically correct but are probably not used. There is simply no empirical evidence in any of the studies reviewed or in the data obtained as part of this study that support the contention that reduced quantities of fluid milk are offered for sale in an effort to increase prices and revenue for producers. The studies that have emphasized this point (Helmberger and Chen; Ippolito and Mason; Price; Kessel) may therefore represent theoretical pieces that are not substantiated (to our knowledge) by empirical evidence.⁸ The reason for this stems from the structure of the milk market. Owner-producer coöps are the primary providers of milk used by processors (Ling), and there is no empirical evidence that indicates they can or are willing to limit fluid milk sales. Furthermore, under the current FMMO system, prices for all classes of milk are administratively set by formula and are based on market prices for cheese, butter, and nonfat dry milk. The incentive, therefore, is to sell as much product as possible at current market prices, behavior that is common in a competitive market where no firm has the ability to shift use to a different class

⁸Most of these studies use data to estimate what impact would occur if this practice existed, but, in fact, none of these studies provide empirical evidence that this practice occurs.

of use in order to capture potential benefits. It also should be noted that the marketing chain for fluid milk sales is significantly different for fluid milk than it is for manufactured products. Fluid milk is processed and distributed through the retail market (Walmart, Kroeger, etc.), while manufactured products are primarily sold to firms in the food service industry (McDonalds, Pizza Hut, Taco Time, etc.). Shifting milk between these two general food chains is probably not likely in today's world even if the elasticities for these products were significantly different.⁹

Price Volatility

It also should be noted that Novakovic suggested that one of the benefits of a FMMO was that they reduce price uncertainty. Seibert et al. also suggested that prices paid to producers would change more frequently following termination of an order. This has generally not been observed since the termination of Order #135.

In an effort to provide some empirical evidence of price volatility before and after termination of Order #135, price data for firms and mail box prices (net prices received by producers) were evaluated. These data are shown in tables 1 and 2. These data show that mailbox price volatility at most (Wisconsin is the exception) of the locations evaluated has declined (lower coefficient of variation or CV) since Order #135 was terminated (this should not be interpreted as a cause and effect relationship). The data in table 2 also shows that the coefficient of variation for prices paid by the firms in Idaho and Utah was mixed when compared to mailbox prices in most of the orders after termination. One, therefore, cannot conclude that prices became more or less volatile in Utah and Idaho following termination of Order #135.

⁹The elasticity of demand at the retail level are commonly assumed in the studies reviewed. They do not consider the elasticity of derived demand for manufactured dairy products in the food service industry.

State or FMMO	January 1, 2000 to April 1, 2004		April 1, 2004 to March 1, 2006	
	Mean	CV	Mean	CV
Northeast	13.21	.14	15.96	.08
Florida	16.05	.11	18.10	.08
Wisconsin	13.22	.14	16.13	.11
Northwest	12.44	.13	14.41	.07
All orders	13.08	.14	15.52	.08
California	12.20	.14	14.29	.10
New Mexico	12.05	.14	13.70	.09
Idaho	12.06	.14	nd	nd
Utah	11.91	.16	nd	nd

Table 1.Mean (\$ per cwt) and coefficient of variation (CV) of monthly mailbox prices for
selected states and orders before and after termination of Order #135

Source: http://www.fmma30.com/Homepage/FO30-MailboxPrices.htm.

Table 2.Coefficient of Variation of monthly milk prices paid to producers by firms in Utah
and Idaho for the period April 1, 2004 to 1 March 2006

Firm	CV	Firm	CV
А	.10	В	.11
С	.11	D	.09
Е	.14	F	.05
G	.10	Н	.07

Firms are not identified by name to maintain confidentiality. Data are only for processors who cooperated or were provided by producers. Increased volatility, as predicted, may not have occurred for several reasons, but the following may be the most important reasons.

First, negotiations between producers and handlers in the area where Order #135 existed have become more common since the order was terminated. For example, about one year after the order was terminated, one of the handlers negotiated a fixed price with its producers. This price was based on both historic and futures prices and is set annually. In this particular case, the volatility was eliminated for an entire year.

Secondly, data for the processors that were surveyed in Idaho indicated that essentially all of the major handlers in Idaho have adopted pricing methods that have little relationship with FMMO formula and guidelines¹⁰ and are generally more closely associated with its value as cheese. These firms have commonly added premiums and discounts (greater emphasis on quality factors) that were not easily applied when Order #135 existed. These pricing changes may have increased uncertainty to some degree, but it has aligned processor and producers toward the end use of the milk being produced. It also should be noted that while Order #135 existed, the PPD was the most variable part of the prices paid to producers (see figure 4)—the coefficient of variation for the PPD for Order #135 from January 1, 2000 to April 1, 2004 was 0.93. Those processors who currently use the FMMO formulas and also have a PPD generally have relatively higher price volatility than those firms that no longer use a PPD. But even those firms that continue to use a PPD have no more price volatility than the FMMO mailbox prices in the orders shown in table 1. This suggests that volatility may be affected more by utilization than national price data for cheese, butter, and NFDM which are used to set prices paid to producers within as

¹⁰One firm in Idaho uses the FMMO formula for class III milk (cheese).

well as outside the FMMO system. This suggests that price volatility may be affected more by utilization than national price data for butter, cheese, and NFDM, which are used to set prices within as well as outside the FMMO system.

Cooperative Loyalty

Cropp suggests that if FMMO did not exist, "dairy cooperatives would be under pressure to pay producers competitive prices [and that] producer loyalty to cooperatives would be based on pay rather than cooperative tenure and loyalty." This also has occurred, at least in Utah, where some long-time coöp members have "jumped ship" to firms that pay higher prices.

Other Lessons Learned

One of the first lessons that was learned with the termination of Order #135 is that pooling of revenues will likely lead to termination of an order if there are differences in the utilization of milk within that order. This suggests that larger pools, including proposals to have a smaller number of orders than currently exist, will probably not be successful in the long run because: (a) producers who have high levels or fluid milk utilization will resist pooling revenues with those having lower levels of fluid milk utilization, and (b) firms will have an incentive to pool milk (paper and/or real) on a high class I utilization order(s) to obtain the benefits of FMMO formula pricing. However, it should be noted that the advantages of pooling across orders will diminish as if large differences in class I utilization for areas/regions do not exist. It must be remembered that fluid milk consumption per capita continues to decline, while per capita consumption of cheese is increasing. When cheese prices rapidly rise, the class III price is higher than the price of class I milk under the FMMO system and negative PPDs occur. In this case, milk prices are lower than they would be for firms that were based on cheese prices. Furthermore, as the percentage of milk going to fluid consumption declines (see figure 5), the advantage of being in an order is diminished because less of the higher priced fluid milk, under FMMO classification guidelines, is pooled.

The PPDs that have been determined by milk handlers since the termination of Order #135 suggest that how milk is pooled can make a difference in the prices received. For example, large national cooperatives, such as DFAs, have the ability to pool milk for their producers over wide areas and across several FMMOs. This essentially negates the existence of FMMO boundaries when order provisions do not limit the pooling of milk within an organization. The ability of handlers to pool milk (either physically or on paper¹¹) also suggests that FMMO boundaries are artificial at best. Furthermore, the size of these large cooperatives and their

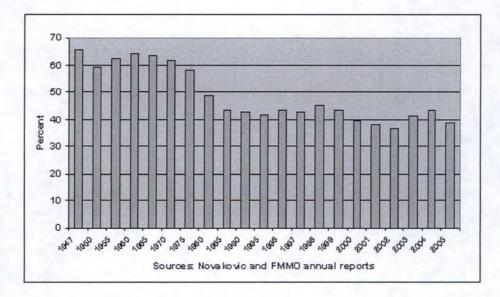


Figure 5. Percentage of milk being used for fluid consumption in the United States, 1947-2005.

¹¹The ability of firms to pool milk on an order with limited physical delivery is one of the most troublesome issues faced in order hearings.

immunity under the Capper-Volstead Act may result in monopoly profits (Masson and Eisenstat), which might be inferred by the growth in cooperative dominance in milk procurement (Ling).

Conclusions

Perhaps the most important lesson learned with the termination of Order #135 is that "life goes on" without an order and that market forces are apparently sufficient, at least in this case, to insure that rational and orderly marketing behaviors and outcomes occur. This suggests that FMMOs, as they currently exist, may have run their course and may be obsolete. One area of concern, however, is the availability of market information if all FMMOs were abolished. National data are available for cheese, butter, and NFDM prices.¹² These data are being used by processors and FMMO administrators to set prices. However, local level information is commonly not available when a FMMO does not exist. This may not be a problem for some producers, because they are of sufficient size that they can devote resources to the acquisition of market information. The lack of market information does represent an area where at least some of the functions of the FMMO system has been a benefit to producers. This suggests that some functions of the FMMO could/should be retained, but the need for the regulatory and pricing functions are probably better served by market forces instead of administrative rules in today's environment. If current developments in the industry, such as product dominance, processed versus fluid milk, and the increasing size/scale of dairy farms continue, the current order system may not survive, and the termination of other orders will likely occur.

¹²Some question the validity of these data, but they are widely used and accepted (Miller).

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