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COMMERCIAL PROCESSED AMERICAN-TYPE CHEESE SALES AND THE USDA CHEESE DISTRIBUTION PROGRAM: A PRELIMINARY ASSESSMENT

by

Forrest E. Stegelin
and
Robert B. Schwart, Jr.
Extension Marketing Economists
and
Ronald D. Knutson
Professor, Agricultural Economics
Texas A&M University
College Station, Texas

The authors found that total commercial sales decline in relation to the size of the increase in the give-away program.

INTRODUCTION

In January 1982, the United States Department of Agriculture (USDA) initiated a program for the direct distribution of processed American-type cheese. The objective of the cheese "give-away" was to lower increasing Commodity Credit Corporation (CCC) stocks that have been accumulating in government warehouses. With relatively high interest rates and increases in the level of stocks, the cheese distribution program was conceived as a method to lower government finance storage costs and to provide low income needy families that spend a significant portion of their disposable income on food, a dairy protein food stuff.

DIRECT DISTRIBUTION OF CHEESE

The USDA began the direct distribution of cheese by giving away 6.2 million

pounds of processed American-type cheese in January 1982 (1). Although some monthly fluctuations in quantity distributed can be observed, the magnitude of the monthly direct distribution increased to over 50 million pounds each month of March and April, 1983. The overall magnitude of the USDA direct distribution program becomes evident from the observed significant changes in quarterly distribution (Table 1). During the first quarter 1982, 38.4 million pounds of processed American cheese was distributed, followed by 41.4 million pounds distributed during the second quarter 1982. Third quarter 1982 distributions declined 27 percent to 30.4 million pounds. However, the distributions rebounded during the fourth quarter 1982 and increased 98 percent above the previous quarter to 60.2 million pounds. This rapid rise in distributions was followed by another jump in the first quarter 1983 to 124.9 million pounds of cheese distributed--a 107 percent increase over the fourth quarter 1982 level.

TABLE 1. DIRECT DISTRIBUTIONS OF AMERICAN-TYPE CHEESE, 1982-1983, MONTHLY AND QUARTERLY (1)

Month and Year	Quarter	Direct Distribution Quantities	
		Monthly	Quarterly Total
~ million pounds ~			
January 1982	I	6.2	38.4
February		17.7	
March		14.5	
April	II	16.1	41.5
May		15.1	
June		10.3	
July	III	8.3	30.4
August		9.0	
September		13.1	
October	IV	11.6	60.2
November		27.3	
December		26.3	
January 1983	I	25.8	124.9
February		43.6	
March		55.5	
April		52.2	

COMMERCIAL SALES OF PROCESSED AMERICAN-TYPE CHEESE

Commercial sales of processed American-type cheese have been strong during 1980-1982, with quarterly movements consistently above 500 million pounds (Table 2). Commercial processed American-type cheese sales totaled 2023.4 million pounds in 1980, 2147.9 million pounds in 1981, and 2164.9 million pounds in 1982. Peak quarterly commercial movement in 1982 was 549.4 million pounds in the third quarter. Fourth quarter 1982 movement declined four percent to 528.1 million pounds. Furthermore, commercial sales during the first quarter 1983 declined another thirteen percent from the fourth quarter 1982 level.

With an apparent displacement of commercial sales or movement due to increasing levels of direct distributions of cheese, Secretary of Agriculture John Block ordered, on April 27, 1983, a cut in levels of direct distribution by the USDA of processed American cheese. Secretary Block set future monthly distribution levels at 25 to 30 million pounds, which represented a 45 to 55 percent decline in distribution levels from the March 1983 high of 55.5 million pounds (5).

The Secretary's announcement was made after the 1983 Jobs Bill had been passed by Congress. The Jobs Bill (Public Law 98-8) provided for, among other items, increased emergency distributions of cheese above the first quarter

TABLE 2. COMMERCIAL MOVEMENTS OF AMERICAN-TYPE CHEESE, 1980-1983, QUARTERLY AND YEARLY (5)

Quarter and Year	Commercial Movements	
	Quarterly	Annual Total
- million pounds -		
I 1980	515.2	
II	501.6	
III	471.2	
IV	535.4	2,023.4
I 1981	528.4	
II	518.3	
III	544.7	
IV	556.5	2,147.9
I 1982	541.3	
II	546.1	
III	549.4	
IV	528.1	2,164.9
I 1983	459.2	

1983 high monthly levels. The Secretary of Agriculture stated the reason for the cut back in direct distribution levels was because of the cheese being distributed displaced commercial sales of cheese, although increased give-away levels would lower the storage costs incurred by the government and lower the CCC stocks of cheese that had been accumulating.

OBJECTIVES

This paper investigates whether the stated reason by Secretary of Agriculture John Block for curtailing the government's direct distribution of cheese was, in fact, correct. That is, was the cheese being distributed displacing commercial sales or movement of cheese? Specific objectives include: (1) evaluating the factors that may effect the level of commercial movement,

such as the dairy support price, government removals and purchases from the available supply, the levels of CCC stocks, and the demand-related factors, and (2) analyzing the relationships among the dairy and milk price support program, the direct distribution of cheese program, and the levels of commercial sales and the movement of processed American-type cheese.

METHODOLOGY

Data from the USDA and the Departments of Labor and Commerce were analyzed using multiple regression analysis and nonparametric statistics tests to look at trends, factors affecting, and interrelationships among the factors affecting the total movement of processed American-type cheese, with particular emphasis on the period January 1980 to April 1983. This time frame provided two "normal" years for control and one and one quarter years of direct cheese distribution with commercial movement data. Due to the limited quantity of data and the early evaluation (neither data nor time since the ordered cut back in distribution is sufficient to view pre- and post-evaluation of the Secretary's decision), the study was merely a preliminary assessment of the situation.

RESULTS

Commercial disappearance (movement) of processed American cheese was hypothesized to be a function of the commercial cold storage stocks (6), the auction price at the National Cheese Exchange for white barrel cheese (4), the per capita consumption of cheese (3), and a ratio of consumer price indices reflecting the cheese price index relative to the price index for the market basket of food (2). For the quarterly data prior to 1982, this expected response tracked favorably with all variables statistically significant. However, with the five quarters of data included since the give-away was initiated, the model deteriorated beyond

an acceptable level for either policy evaluation or market forecasting.

Consequently, disappearance (or movement) was redefined to include both commercial sales and government distributions. By including the levels of direct government distribution, the model tracked accurately, especially when focusing on the quarterly data from 1980-1983. Unfortunately, the pricing variables diminished in their statistical significance. The least-cluttered best fit was obtained by regressing total disappearance (commercial movements plus government distribution) on time (Figure 1), indicating per capita consumption and population growth are the significant variables affecting total movements.

The role of the milk price support program in generating CCC stocks and government program removals and purchases was also considered as it might effect commercial movement. Although nothing statistically significant was observed, some coincidental relationships were seen. The milk support price was announced at \$12.36 per hundredweight in 1980, but this support price was increased in 1981 to its current level of \$12.80 per hundredweight. Consequently, the milk support price was constant for the year prior to the cheese distribution as well as for the time since the distribution program began.

Coinciding with the rise in the support price are the peaks in the quarterly government purchases of surplus dairy products, called removals (Figure 2). Government removals reflect the difference between the commercial sales of milk and dairy products and milk production. Removals of American-type cheese from the market to CCC stocks have followed a seasonal trend that reflects the seasonal national milk production pattern. However, with each increase in milk support price,

the peak in the quarterly removal levels similarly increased, but by no perceptual standard relationship or amount.

SUMMARY AND IMPLICATIONS

The increases in the "free" direct distributions of processed American-type cheese and the observed declines in commercial sales and movements indicate direct food distribution programs for cheese interfere with commercial sales and movement. Total disappearance (commercial plus direct distribution) appears to be upwardly constrained not by price relationships nor inventory levels, but as a function of per capita consumption. Total commercial sales decline in relation to the magnitude of increase in the give-away program. Consequently, the implication from the analysis is that families that either qualify for the cheese give-away, or are otherwise receiving the cheese, are typically the families that normally purchase cheese as a staple dairy product protein foods source. These "low income, needy" families that reportedly spend a significant portion of their income on food would apparently buy the cheese if it is not available free from the government. Therefore, Secretary of Agriculture John Block's premise is correct.

The entrepreneurs who are most negatively affected by the decline in sales as a result of the increased direct distribution are the retailers, brokers, and jobbers working the retail dairy cases. On the other hand, the cooperative manufacturer-wholesaler packs and sells to either the retail or primary market or the government (CCC stocks) as the residual claimant, and therefore has a "ready" market absorbing the processed American-type cheese.

GOVERNMENT SPONSORED DIRECT DISTRIBUTION PROGRAMS

The cheese issue raises additional questions in the agricultural policy and

FIGURE 1
TOTAL DISPOSITION
COMMERCIAL SALES AND DIRECT DISTRIBUTION,
AMERICAN CHEESE, UNITED STATES, QUARTERLY 1980 TO 1983
 MILLION POUNDS

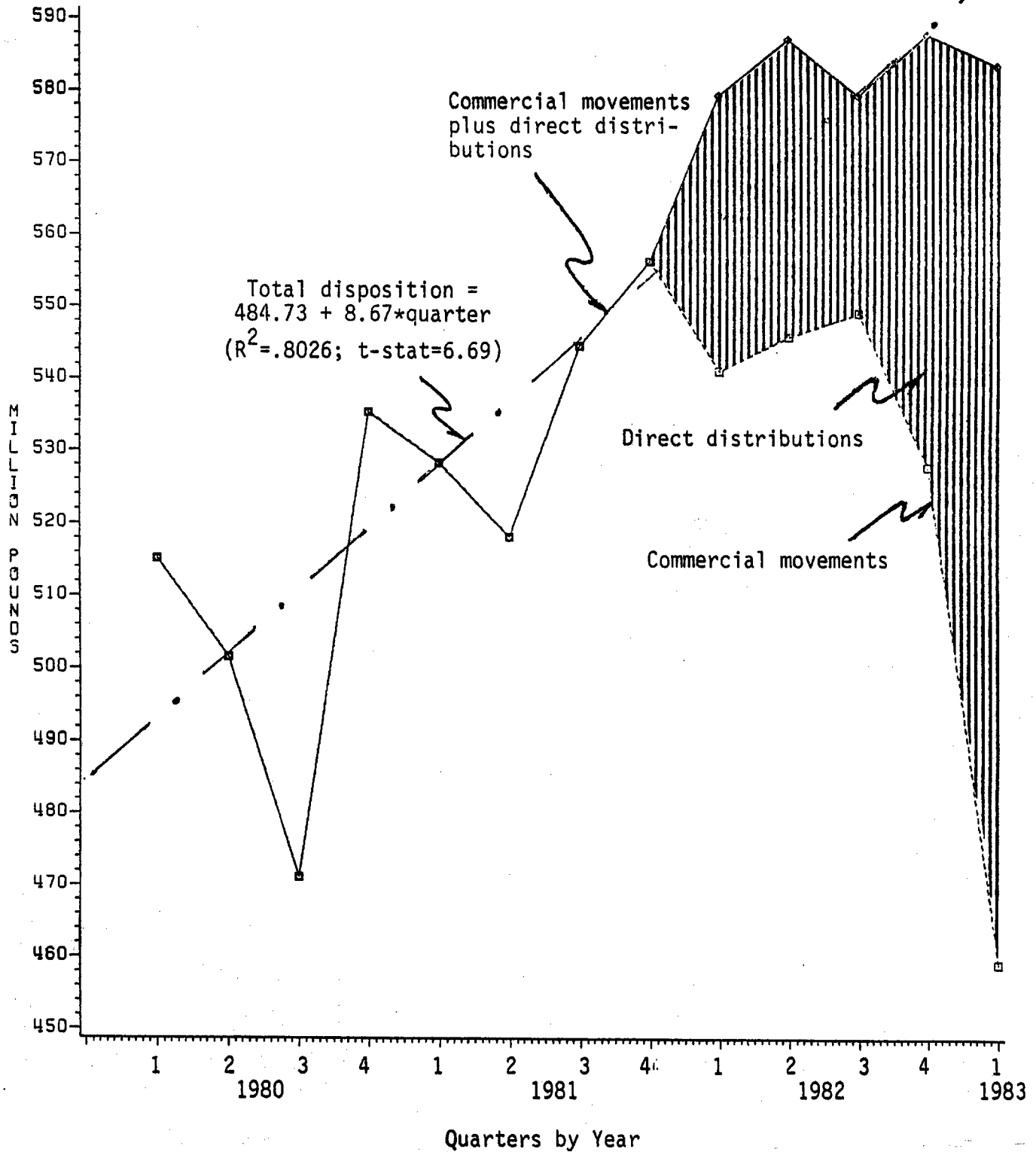
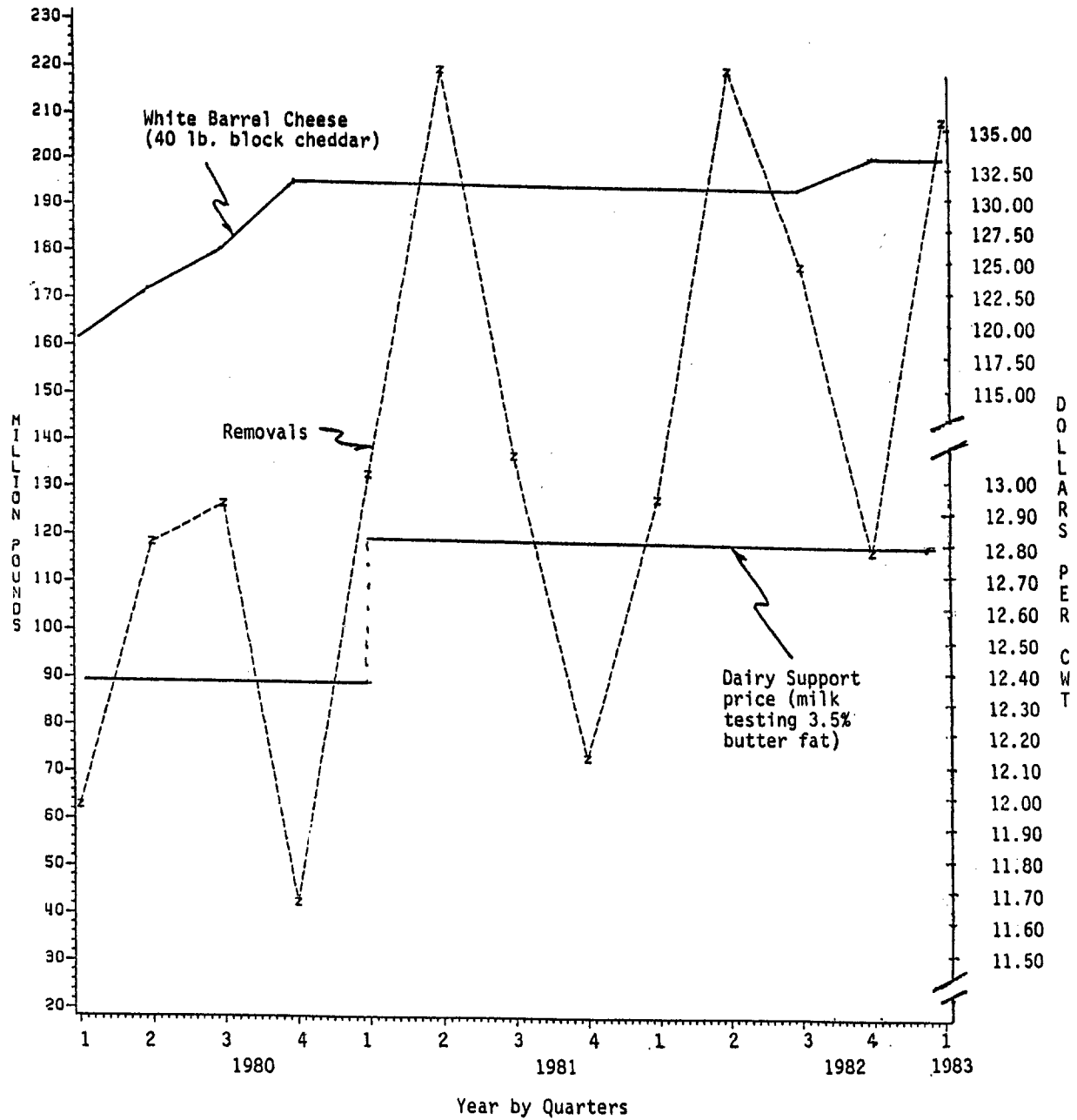


FIGURE 2

CCC REMOVALS, AMERICAN TYPE CHEESE UNITED STATES, QUARTERLY 1980 TO 1983 MILLION POUNDS



food distribution arenas. With other food products, such as butter, rice, and flour, currently being distributed or being considered for distribution through similar give-away programs, is it reasonable to assume comparable results to the cheese question? Although data is not available for analysis, conjecture prevails for those products not having consumer accepted substitutes (such as flour) commercial movement would decline compensating for any direct distribution. However, limited significance would be observed in declining commercial sales for those food stuffs where either substitutes exist (i.e., margarine for butter) or per capita consumption is nil (i.e., rice in the United States).

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