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B641: A Comparison of Food Prices in Boston, Massachusetts and Bangor, Maine: December, 1965

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FOREWORD

This report was prepared by four students, Allan W. MacKinnon Mrs. Bonnie G. Marsh, John C. Dean and Richard E. Vizard, under the direction of Dr. Arnold H. Raphaelson, in a College of Business Administration graduate course, The Economic Research Seminar.

MacKinnon and Mrs. Marsh were primarily responsible for devising methods of selection, weighting and calculation consistent with those used by the Bureau of Labor Statistics, U.S. Department of Labor, in constructing the food price index for Boston. Dean did some research on food price indexes and, with MacKinnon and Mrs. Marsh, participated in the field survey of Bangor markets. Vizard was responsible for the comparative survey of advertized food prices, and MacKinnon wrote the final report.

The original goal of the study was to compare living costs in Bangor and Boston. This proved too broad a study for the limited resources of the group. However, with the assistance of John E. Conaty of the Boston Regional Office, Bureau of Labor Statistics, the group decided upon a valid food price comparison of the two cities.

It is hoped that future efforts may result in refinement of the methods and expansion of the scope of this study so that Maine prices may be compared systematically and over longer periods of time with prices elsewhere.

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A COMPARISON OF FOOD PRICES IN BOSTON, MASSACHUSETTS AND BANGOR, MAINE

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INTRODUCTION

Prices of food purchased for home use constitute an important part of the consumer's total budget. This study is based on the hypothesis that the cost of a selected group of "food-at-home" items is higher in Bangor than in Boston.

The U.S. Bureau of Labor Statistics publishes a list of average prices for a number of "food-at-home" items for Boston each month. This list provided the Boston data with which the Bangor prices could be compared.

The "food-at-home" price survey done in Boston is part of a broader study that has been conducted by the Bureau of Labor Statistics (BLS) for nearly five decades.[1] This study establishes the Consumer Price Index that is a statistical measure of changes in prices of goods and services purchased by urban wage earners and other consumers. As such, it attempts to measure all consumer expenses with the exceptions of income taxes and personal property taxes. Boston is one of a number of cities for which the index is constructed.

As it would be impossible to measure the price changes on every good or service purchased by the consumer, a "market basket" of 400 items is used to represent total consumer purchases. These items are determined through extensive consumer surveys that seek to find the kinds, qualities, and quantities purchased by the average consumer. The latest such study was the Consumer Expenditure Survey in 1960-1961. The study drew upon information from 4,344 families and 517 single persons to determine the content of a representative "market basket."

Although the Consumer Price Index is constructed for a number of U.S. cities, it does not show which city has the higher cost-of-living. It only shows the extent to which prices have risen within each city over a certain base period. The current base period index value is

[1] The following data on the Consumer Price Index is drawn from *The Consumer Price Index, A Short Description*, published by the United States Department of Labor, September, 1964.

1957-59 = 100. However, the index numbers also are available with base periods of 1939 and 1947-49, for the market baskets current in those years.

The Consumer Price Index is used in labor-management negotiations, as a basis for adjustments in long-term contracts, and as a basis for adjustments in royalties, pensions, welfare payments, and even some alimony payments. It also is used widely as an indicator of inflationary or deflationary trends in the economy.

As with any survey of this type, there are limitations to the Consumer Price Index. Although the Bureau of Labor Statistics makes every effort to eliminate reporting errors, it must be accepted that they will exist to a certain extent. In addition, there are possible sampling errors that could be eliminated only by larger samples in which the cost of surveys would be prohibitive.

The study reported here is based on the principle of the Consumer Price Index. However, rather than measuring price changes over time from a base period, the city of Boston is used as the base, and Bangor prices are measured against this base in one particular week.

The survey of Bangor prices was conducted entirely by members of the class who had little or no experience in this type of work. However, care was taken to follow the subsequent procedures, and it is felt an accurate picture of the price differences is portrayed. On the basis of the study rests the proof of the hypothesis that the cost of "food-at-home" items is higher in Bangor than in Boston. The remainder of the report explains the methods involved in comparing prices and examines the results of the price survey.

Selection of stores

Every effort was made to follow the practices of the Bureau of Labor Statistics (BLS) in Boston when deciding how to conduct the price survey in Bangor. The BLS prices foods in all the large stores (annual sales in excess of $300,000) and in a sample of the small stores.

The *1963 Census of Business* stated that there were 67 retail food outlets in Bangor that year. However, the trend over recent years has been a decline in the number of stores operated in Bangor. A cross-check of the *1965 Maine Register* and the Yellow Pages of the telephone directory indicated that this trend has continued, as only 52 stores were located. Of the 52 stores, nine fell in the large store group according to preliminary information. This was later proved correct by field work.

Following the practice of the Boston bureau, the selected food items were priced in the nine large stores and in 16 of the small stores. Since these small stores serve mainly their surrounding neighborhoods, the sample was selected so that each geographical area of Bangor would be represented by at least one small store.

It is important to note that the Dow Air Force Base Commissary, which, according to the *1963 Census of Business,* accounts for approximately 15% of the annual food sales in the Bangor area, was omitted from the price survey. It was felt that the Commissary prices would not be comparable to the Boston prices in privately owned stores.

Choice of food items and sizes to price

The selection of food brands to price in Bangor was made by the same method used in Boston by the BLS. The brand allowed the most shelf space in each store was assumed to be the most widely purchased and therefore indicative of the amount spent by the consumer for that type of food.

Whenever possible, the food items were priced in the same unit (e.g., pound, can size) for which the BLS publishes a price. When this was not possible, the Bangor price was converted to the same unit priced in Boston. For example, the BLS publishes a price for an eight-ounce package of bologna. As not all of the Bangor stores surveyed sold this size package, the available size was priced and the price was converted to an eight-ounce package using the price per ounce.

Dates selected for pricing

The Bureau of Labor Statistics prices its food items during a three day period each month. The days for December pricing were Thursday, Friday, and Saturday, December 9 through 11. By pricing foods on these days, the prices of weekend specials are taken into consideration. These are also the days of the week when most consumers do their food shopping.

In Bangor, all of the large stores were priced on the days noted above. However, several of the small stores were priced earlier in the same week. This was necessary because the number of field workers involved was not large enough to price all the stores on Thursday through Saturday. Since small stores make a habit of offering few, if any, weekend specials, no price distortion was felt to be involved. In addition, the small store operators were questioned as to any special prices they planned for the weekend, and these were noted.

COMPARISON OF FOOD PRICES

After the food items had been priced in each store, the various prices were combined to obtain one price for each item. This price had to be weighted to take into account the number of people who would buy each item at the several prices that existed throughout Bangor. This was done first by obtaining a simple average price for each item for the large store group and the small store group. Then the large store average was weighted according to the percentage of total sales volume done by the large store group.

Although the total annual sales of all Bangor retail food outlets was not available for 1965, the *1958 Census of Business* reported 1958 food sales of $14,192,000; the *1963 Census of Business* reported 1963 food sales of $16,397,000; and *Sales Management Survey of Buying Power* reported 1964 food sales of $17,147,000. Carrying this trend forward, it would appear that 1965 food sales for Bangor would be a little less than $18,000,000.

Even though the different stores did not reveal their actual sales volumes, it was possible to obtain, from a reliable source, a list of weekly sales volume estimates for food stores within Bangor. These figures were converted to annual volumes by multiplying by 52 weeks. Though none of the volumes on the list was associated with a store name, it was known that the list contained a figure for the Dow Air Force Base Commissary. The figure that most closely indicated the annual Commissary sales as given by the *1963 Census of Business* was eliminated from the list. Of the remaining sales volumes, nine figures indicated annual sales in excess of $300,000. Since our field work had shown nine stores with annual sales in excess of this amount, it seemed reasonable to assume that the nine figures on the list gave the total annual sales volume of our large store group. This amount was $11,960,000.

The estimates of total food store volume for Bangor and total volume for the large store group indicated that the nine large stores sold two-thirds of the total food volume in Bangor. The large store prices were weighted accordingly with the following formula:

$$\frac{(\text{large store average price} \times 2) + (\text{small store average price})}{3}$$

The formula yielded an average price for each food item with the heavier weight allowed to the large store's average price. For example, the large store's average price for a pound of bacon was 90.2¢ and the small store average price was 93.9¢. Using the above formula:

$$\frac{(90.2 \times 2) + (93.9)}{3} = 91.4¢$$

This is the weighted average price for a pound of bacon and the price that was used in the comparison with Boston prices.

Because the total food sales for Bangor and the large store group were estimates, a number of prices were determined giving 60% and 70% weights to the large store average prices. The differences in the final average prices within this 10% range were insignificant. Since it is not likely that any error in the estimates would take the large store group's importance outside this 10% range, it was felt the two-thirds weight provided an accurate average price for each food item in Bangor.

The Bangor average prices for each item were compared to the Boston average prices for each item as published by the Bureau of Labor Statistics. As table 1 of appendix A indicates, of the 84 food items that were compared, 26 (31.0%) were priced lower in Bangor, two (2.3%) were priced the same in both cities, and 56 (66.7%) were priced higher in Bangor.[2] It is doubtful that any sampling error would exceed 5% of the prices noted. Therefore, it is possible that any Bangor prices falling within the 95 to 105% range of the Boston prices may not actually differ. Even with this limitation, 43 (51.1%) of the food items compared were priced higher in Bangor, and only 22 (26.2%) of the items were priced lower in Bangor.

Several items in which pricing errors were obvious were not used. For example, celery was priced by the bunch in Bangor, but the price reported by Boston was by the pound. Any attempt to convert the Bangor price to pounds would involve taking a sample weight of bunches. Since this would build a sample upon a sample, it was decided not to compare the celery prices at all.

As table 1 of appendix A indicates, of the different categories of food, only beef and veal showed predominantly lower prices in Bangor. It is possible that the lower prices may result from a lack of demand for high-priced meats in Bangor. The latest figures available reported a per capita income in Maine of $2,132, while per capita income in Massachusetts was $2,965.[3] The rather significant difference between the two states may provide a basis for assuming that Maine

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[2] In addition to the reported price differences, several of the items priced (soft drinks, candy) were subject to a 4% sales tax in Maine, while no sales tax existed in Massachusetts at the time of the survey.

[3] U.S. Department of Commerce, *Survey of Current Business*, July, 1965, p. 8.

residents have a lower demand for steaks and other high-priced meats. The lower demand could be reflected in the price differentials.

The only other category in which Bangor prices are not predominantly higher is fish. Fresh and frozen haddock fillets are both lower in Bangor, while the two canned items, tuna fish and sardines, are higher. Even though Maine is a large producer of sardines, the sample stores allotted more shelf space to Norwegian sardines which were priced higher than Maine brands.

Another item for which the demand may be responsible for a price difference is skim milk. Even though whole milk, both at the store and delivered, showed a higher price in Bangor, skim milk was priced considerably lower. If it is true that people in larger cities are more weight conscious than people in less congested areas, the larger demand for skim milk in Boston would explain its higher price.

With few exceptions, the prices of fruits and vegetables and other foods at home were higher in Bangor. Most of the items originate in other areas of the country and the higher prices may be attributed partly to the cost of transporting the bulk of vegetables and canned goods.

COMPARISON OF AVERAGE EXPENDITURES

Although it was possible, with the average price for each food item, to compare Boston and Bangor food prices, a more significant comparison is between the average weekly expenditure on each item in each city. Such a comparison would take into consideration the fact that the average family does not buy all the items each week. One example of this is flour. The average housewife buys a five-pound bag of flour about every three weeks. By allocating one-third of the price of a five-pound bag of flour to each week's expenditures, a more accurate picture of the cost of food is obtained.

Ideally, the number of units of each food item purchased weekly was necessary for this type of comparison. These figures, however, were not available. A recent publication which gives the average weekly expenditure for each item in the United States makes possible the computation of the number of units purchased weekly.[4]

The average weekly expenditure for each food item in the U.S. was applied to Boston, the base city. The total expenditures for the food items listed in the study gave a weekly amount spent on all the items in Boston. By dividing the average weekly expenditure for each

[4] Fabian Linden, Editor, *Expenditure Patterns Of The American Family*, The National Industrial Conference Board, 1965.

food item by the Boston average price for each food item, it was possible to determine the number of units of an item that were purchased. For example, the average weekly expenditure for flour was 18¢ and the Boston average price for flour was 55.1¢. By dividing 18¢ by 55.1¢ it was found that the number of units (in the case of flour, a unit was five pounds) purchased weekly was .33.

Once the number of units purchased of each food item had been determined, it was possible to multiply the number of units purchased by the Bangor average price for each item to find the average weekly expenditure for each item in Bangor. Again, in the case of flour, the number of units purchased (.33) was multiplied by the Bangor average price for flour (60.7¢) to find that the average weekly expenditure on flour in Bangor was 20¢.

The preceding method allowed an accurate comparison of relative weekly food costs in Boston and Bangor when it was possible to compute the figures for each item. In several cases the average weekly expenditure was known only for a group of items rather than each single item. In these cases the same procedure was followed, but there are limitations which must be mentioned.

Inherent in the grouping procedure is the assumption that the items within the group are used in the ratio indicated by the units in which they are priced. For example, oranges and grapefruit were grouped. Since oranges were priced by the dozen and grapefruit were priced individually, the assumption involved is that for every one grapefruit used, one dozen oranges will be used. This may or may not be true; to the extent that it is not, the average weekly expenditure will be inaccurate.

Another problem with the grouping procedure existed with the ratio of prices within the group. If the ratio of prices within each group was the same in each city no problem existed. However, whenever these ratios were not the same, the average weekly expenditure for the group would not allow a perfectly accurate comparison between cities.

Despite these limitations it is felt that the average weekly expenditure comparison is quite accurate. Since few items had to be grouped, the final result is not likely to be affected significantly by the limitations mentioned. Hence, the total average weekly expenditures for Boston and Bangor could be compared to indicate the differences in cost on the same group of food items between the two cities.

As a check on this procedure, the average weekly expenditure was computed for each city using the percentage of the food budget spent on various items. These percentages were computed from data pub-

lished by the Bureau of Labor Statistics.[5] With these figures, the cost of the Bangor food items as a percentage of the cost of food items in Boston was substantially the same as with the method reported in this study.

Although our comparison of average weekly expenditures on food items in Boston and Bangor assumes similar eating habits in each city, this probably does not affect the validity of the conclusions. In a recent BLS survey,[6] it was found that with the exception of low income groups (annual family income below $3,000) ". . . regional differences in food consumption patterns were not considered significant . . ." The low income differences mentioned seemed largely attributable to southern patterns of consumption of meat and grain products.

As shown in table 2 of appendix A, the average weekly expenditure on the compared food items in Bangor was 104% of the comparable figure in Boston. Chart 1 indicates that the only categories which showed lower expenditures in Bangor were beef, veal and poultry. The lower expenditures on beef and veal in Bangor are not difficult to explain in view of the significantly lower prices for the items within this category in Bangor. However, of the three items within the poultry category, two were priced higher in Bangor, yet the average expenditures on this category were lower in Bangor because the one item priced lower in Bangor is enough lower to offset the higher prices of the other two.

The only other category in which Bangor average expenditures were not higher than Boston was for other meats. The average expenditures in each city in this category were the same. Although three of the five items within this category were priced higher in Bangor, the price differences for the category as a whole were cancelled when the number of units purchased of each item was considered. Notice also that this category included a high-priced meat (lamb chops, loin) which followed the pattern of the meats within the beef and veal category.

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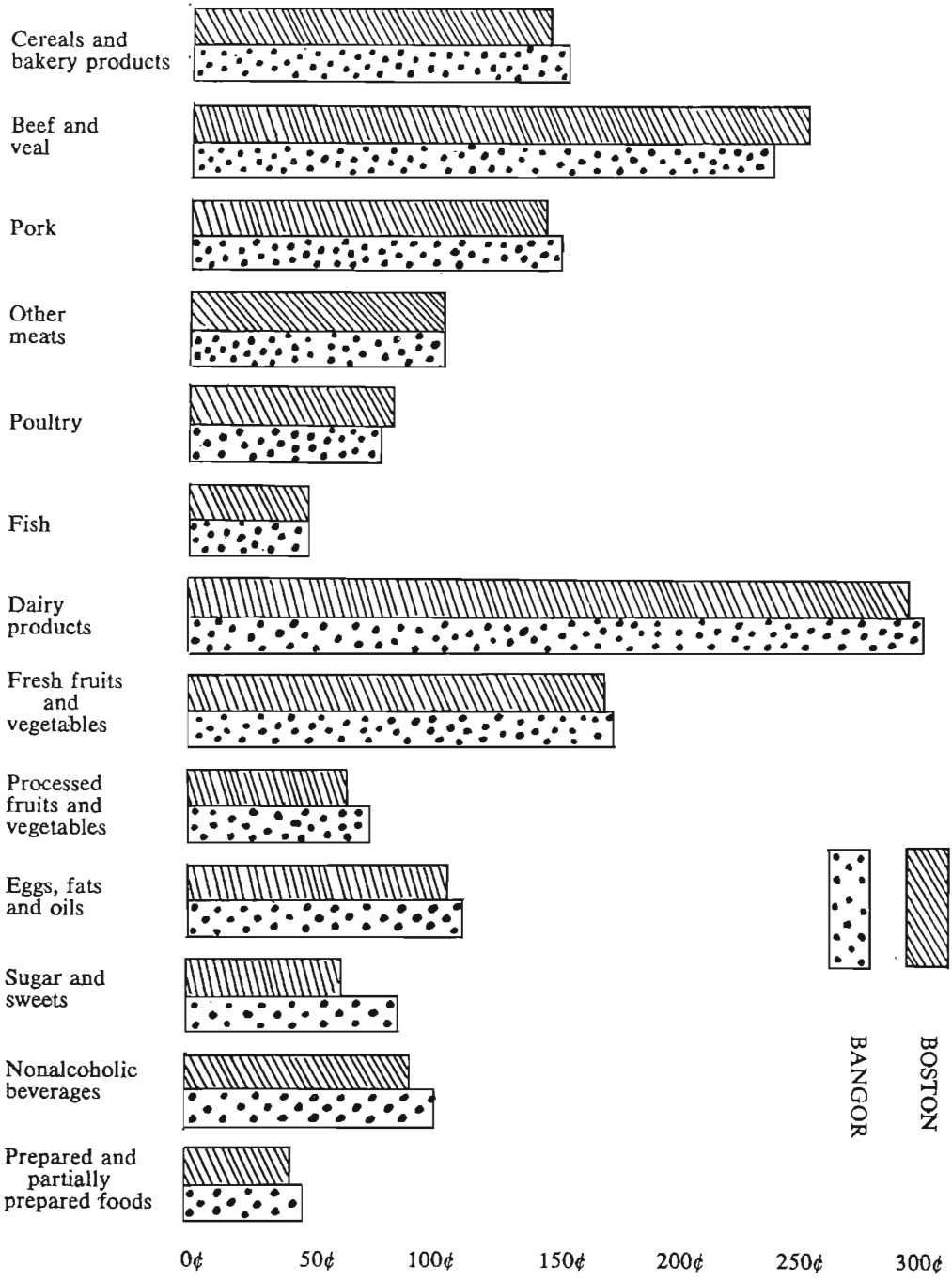
[5] United States Department of Labor, *The Consumer Price Index, A Short Description,* September, 1964, p. 11.

[6] United States Department of Labor, "Intercity Differences In Family Food Budget Costs," *Monthly Labor Review,* October, 1963, p. 1190.

CHART 1

Comparison of average weekly food expenditures



CONCLUSIONS

The store survey and the advertised price comparisons reported in appendix B indicate that the cost of food-at-home items is higher in Bangor than in Boston. In addition to higher average prices in Bangor for many items, the total average expenditure for the group of food items compared is 4% higher in Bangor.

Although it is clear that the cost of food is higher in Bangor, the study made no attempt to determine any of the causes of the cost differential. Two possible reasons might be the distance of Bangor from some of the major food suppliers and the difference in existing competition between Bangor and Boston. Bangor is 250 miles from Boston, the nearest major metropolitan area. There can be no doubt that foods not produced locally would have to sell for prices high enough to cover the additional cost of transporting them from Boston as a regional distribution center. The existence of any type of discriminatory pricing policy in Bangor due to a lack of competition could be debated but would be hard to prove. That there is competition among food stores in Bangor cannot be denied; yet, there is certainly more competition in Boston. In addition, and probably more important, the competition among wholesale food distributors in Bangor is certainly less than in Boston. To show the extent that this affects food prices would involve a detailed study of the structure and costs of the wholesale distributors in each area.

The existence of higher food costs in Bangor has a substantial effect on real income in this area. As noted earlier in this study, per capita money income is more than $800 lower in Maine than Massachusetts. Since the amount spent on food-at-home is almost 18% of the total average family budget,[7] the higher food cost in Bangor makes the gap even larger in real terms.

[7] United States Department of Labor, *The Consumer Price Index, A Short Description,* September, 1964, p. 11.

APPENDIX A
TABLE 1
Average Retail Prices of Selected Foods in Boston and Bangor
DECEMBER 1965

Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
CEREALS AND BAKERY PRODUCTS				
Flour, white	5 lb.	55.1	60.7	110.2
Cracker meal	8 oz.	19.0	15.8	83.2
Corn flakes	12 oz.	31.6	31.6	100.0
Rice, long grain	lb.	21.5	22.7	105.6
Bread, white	lb.	19.8	22.9	115.7
Bread, whole wheat	lb.	29.7	29.9	100.7
Cookies, cream filled	lb.	49.7	45.2	90.9
MEATS, POULTRY AND FISH				
BEEF AND VEAL				
Steak, round, bone-in, choice	lb.	138.4	132.3	95.6
Steak, sirloin, bone-in, choice	lb.	156.2	121.4	77.7
Steak, porterhouse, bone-in, choice	lb.	144.8	113.0	78.0
Rump roast, boneless, choice	lb.	113.0	106.8	94.5
Rib roast, bone-in, choice	lb.	90.4	95.0	105.1
Chuck roast, boneless, choice	lb.	78.6	73.3	93.3
Hamburger, preground	lb.	62.9	67.9	107.9
Liver, beef	lb.	58.9	47.7	81.0
Veal cutlets	lb.	155.7	136.8	87.9
PORK				
Chops, center grade	lb.	101.4	112.1	110.6
Roast, loin	lb.	75.6	67.7	89.6
Pork sausage, fresh	lb.	69.2	80.8	116.8
Ham, whole tenderized	lb.	75.4	97.1	128.8
Ham, picnic	lb.	56.2	57.0	101.4
Bacon, sliced	lb.	93.7	91.4	97.5

APPENDIX A

TABLE 1 (cont.)
Average Retail Prices of Selected Foods in Boston and Bangor
DECEMBER 1965

Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
MEATS, POULTRY AND FISH (cont.)				
OTHER MEATS				
Lamb chops, loin	lb.	155.9	131.1	84.1
Frankfurters	lb.	74.6	77.5	103.9
Ham, canned	lb.	109.0	118.2	108.4
Bologna, sausage	8 oz.	47.3	44.2	93.4
Salami, sausage	8 oz.	54.8	65.2	119.0
POULTRY				
Frying chicken	lb.	38.8	40.8	105.2
Chicken breasts	lb.	68.8	62.1	90.3
Turkey	lb.	48.7	49.4	101.4
FISH				
Haddock fillet, frozen	lb.	64.4	61.9	96.1
Haddock fillet, fresh	lb.	78.3	71.2	90.9
Tuna fish, white meat, solid pack	7 oz.	38.1	41.4	108.7
Sardines, packed in vegetable oil	4 oz.	14.0	24.6	175.7
DAIRY PRODUCTS				
Milk, fresh, grocery	½ gal.	47.6	53.7	112.8
Milk, fresh, delivered	½ gal.	53.4	54.5	102.1
Milk, fresh, skim	qt.	28.1	20.3	72.2
Milk, evaporated	14½ oz.	14.7	17.8	121.1
Ice cream	½ gal.	90.8	82.4	90.7
Cheese, American process	8 oz.	36.8	37.0	100.5
Butter	lb.	74.1	77.7	104.9

APPENDIX A

TABLE 1 (cont.)
Average Retail Prices of Selected Foods in Boston and Bangor
DECEMBER 1965

Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
FRUITS AND VEGETABLES				
FRESH FRUITS AND VEGETABLES				
Apples	lb.	13.6	12.3	90.4
Bananas	lb.	16.7	14.4	86.2
Oranges	doz.	76.2	89.7	117.7
Orange juice, fresh	qt.	44.7	42.2	94.4
Grapefruit, size 80	each	13.8	14.4	104.3
Potatoes	10 lb.	68.6	52.9	77.1
Onions	lb.	10.2	13.1	128.4
Cabbage	lb.	9.5	10.3	108.4
Carrots	lb.	14.9	16.6	111.4
Lettuce, size 24	head	28.2	33.3	118.1
Peppers	lb.	29.2	30.8	105.5
Spinach	10 oz.	29.9	33.8	113.0
Tomatoes	lb.	46.8	53.8	115.0
PROCESSED FRUITS AND VEGETABLES				
Fruit cocktail	#303 can	27.2	34.0	125.0
Pears	#2½ can	48.9	41.3	84.5
Pineapple-grapefruit juice drink	46 oz. can	33.5	40.6	121.2
Orang juice concentrate, frozen	6 oz. can	21.3	24.4	114.6
Lemonade concentrate, frozen	6 oz. can	13.3	13.7	103.0
Beets	#303 can	18.2	18.2	100.0
Peas, green	#303 can	23.8	24.4	102.5
Tomatoes	#303 can	15.8	21.4	135.4
Dried beans	lb.	20.1	31.7	157.7
Broccoli, frozen	10 oz.	26.3	25.5	97.0

APPENDIX A
TABLE 1 (cont.)
Average Retail Prices of Selected Foods in Boston and Bangor
DECEMBER 1965

Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
OTHER FOODS AT HOME				
Eggs, large, grade A	doz.	68.0	70.2	103.2
FATS AND OILS				
Margarine	lb.	24.1	28.8	119.5
Salad dressing, Italian	8 oz.	37.1	39.4	106.2
Salad or cooking oil	pt.	36.1	37.1	102.8
SUGAR AND SWEETS				
Sugar	5 lb.	60.6	65.9	108.7
Grape jelly	12 oz.	29.2	30.1	103.1
Chocolate bar	1 oz.	4.6	9.3	202.2
Syrup, chocolate flavored	16 oz.	20.4	22.2	108.8
NON-ALCOHOLIC BEVERAGES				
Coffee	1-lb. can	80.5	89.3	110.9
Coffee, instant	6 oz.	92.8	106.2	114.4
Tea bags	pkg. of 48	57.4	64.6	112.5
Cola drink	ctn. 72 oz.	50.4	58.3	115.7
Carbonated fruit drink	ctn. 72 oz.	53.1	59.6	112.2
PREPARED AND PARTIALLY PREPARED FOODS				
Chicken soup	10½ oz.	17.6	18.9	107.4
Spaghetti	15¼ oz.	15.8	18.7	118.4
Mashed potatoes, instant	7 oz.	37.4	35.3	94.4
Potatoes, french fried	9 oz.	18.7	17.5	93.6
Baby foods	4½ oz.	9.9	11.5	116.2
Sweet pickle relish	12 oz.	34.0	37.0	108.8
Pretzels	8 oz.	27.6	29.4	106.5

APPENDIX A

TABLE 2

Average Weekly Expenditures for Selected Food Items in Boston and Bangor
DECEMBER 1965

Item	Unit	Number of units purchased	Boston expenditure (cents)	Bangor expenditure (cents)
CEREALS AND BAKERY PRODUCTS				
Flour, white	5 lb.	.33	18	20
Cracker meal	8 oz.	.21	04	03
Corn flakes	12 oz.	.25	08	08
Rice, long grain	lb.	.37	08	08
Bread, white	lb.	3.48	69	80
Bread, whole wheat	lb.	.54	16	16
Cookies, cream filled	lb.	.50	25	23
MEATS, POULTRY AND FISH				
BEEF AND VEAL				
Steak, round, bone-in, choice	lb.	.21	93	77
Steak, sirloin, bone-in, choice	lb.			
Steak, porterhouse, bone-in, choice	lb.			
Rump roast, boneless, choice	lb.	.26	72	72
Rib roast, bone-in, choice	lb.			
Chuck roast, boneless, choice	lb.			
Hamburger, preground	lb.	1.06	67	72
Liver, beef	lb.	.17	10	08
Veal cutlets	lb.	.12	18	16
PORK				
Chops, center grade	lb.	.34	84	89
Roast, loin	lb.			
Pork sausage, fresh	lb.			
Ham, whole tenderized	lb.	.19	25	29
Ham, picnic	lb.			
Bacon, sliced	lb.	.42	39	38

APPENDIX A

TABLE 2 (cont.)

Average Weekly Expenditures for Selected Food Items in Boston and Bangor
DECEMBER 1965

Item	Unit	Number of units purchased	Boston expenditure (cents)	Bangor expenditure (cents)
MEATS, POULTRY AND FISH (cont.)				
OTHER MEATS				
Lamb chops, loin	lb.	.16	25	21
Frankfurters	lb.	.29	22	22
Ham, canned	lb.	.10	11	12
Bologna, sausage	8 oz.	.48	49	52
Salami, sausage	8 oz.			
POULTRY				
Frying chicken	lb.	.54	85	82
Chicken breasts	lb.			
Turkey	lb.			
FISH				
Haddock fillet, frozen	lb.	.20	29	27
Haddock fillet, fresh	lb.			
Tuna fish, white meat, solid pack	7 oz.	.39	15	16
Sardines, packed in vegetable oil	4 oz.	.29	04	07
DAIRY PRODUCTS				
Milk, fresh, grocery	½ gal.	1.68	80	90
Milk, fresh, delivered	½ gal.	1.80	96	98
Milk, fresh, skim	qt.	.46	13	09
Milk, evaporated	14½ oz.	1.09	16	19
Ice cream	½ gal.	.43	39	35
Cheese, American process	8 oz.	.84	31	31
Butter	lb.	.39	29	30

APPENDIX A

TABLE 2 (cont.)
Average Weekly Expenditures for Selected Food Items in Boston and Bangor
DECEMBER 1965

Item	Unit	Number of units purchased	Boston expenditure (cents)	Bangor expenditure (cents)
FRUITS AND VEGETABLES				
FRESH FRUITS AND VEGETABLES				
Apples	lb.	1.32	18	16
Bananas	lb.	1.08	18	16
Oranges	doz.	.31	28	32
Grapefruit, size 80	each			
Orange juice, fresh	qt.	.36	16	15
Potatoes	10 lb.	.38	26	20
Onions	lb.	.59	06	08
Cabbage	lb.	.63	06	06
Lettuce, size 24	head	.57	16	19
Peppers	lb.	.27	08	08
Spinach	10 oz.	.40	12	14
Tomatoes	lb.	.30	14	16
PROCESSED FRUITS AND VEGETABLES				
Fruit cocktail	#303 can	.18	14	14
Pears	#2½ can			
Pineapple-grapefruit juice	46 oz. can	.24	08	10
Orange juice concentrate, frozen	6 oz. can	.75	16	18
Lemonade concentrate, frozen	6 oz. can	.15	02	02
Beets	#303 can	.33	06	06
Peas, green	#303 can	.29	07	07
Tomatoes	#303 can	.38	06	08
Dried beans	lb.	.25	05	08
Broccoli, frozen	10 oz.	.08	02	02

APPENDIX A

TABLE 2 (cont.)
Average Weekly Expenditures for Selected Food Items in Boston and Bangor
DECEMBER 1965

Item	Unit	Number of units purchased	Boston expenditure (cents)	Bangor expenditure (cents)
OTHER FOODS AT HOME				
Eggs, large, grade A	doz.	1.15	78	81
FATS AND OILS				
Margarine	lb.	.79	19	23
Salad dressing, Italian	8 oz.	.11	04	04
Salad or cooking oil	pt.	.25	09	09
SUGAR AND SWEETS				
Sugar	5 lb.	.40	24	26
Grape jelly	12 oz.	.34	10	10
Chocolate bar	1 oz.	4.78	22	44
Syrup, chocolate flavored	16 oz.	.39	08	09
NON-ALCOHOLIC BEVERAGES				
Coffee	1-lb. can	.42	34	38
Coffee, instant	6 oz.	.18	17	19
Tea bags	pkg. of 48	.16	09	10
Cola drink	ctn. 72 oz.	.46	23	27
Carbonated fruit drink	ctn. 72 oz.	.19	10	11
PRAPARED AND PARTIALLY PREPARED FOODS				
Chicken soup	10½ oz.	.45	08	09
Spaghetti	15¼ oz.	.19	03	04
Mashed potatoes, instant	7 oz.	.13	05	05
Potatoes, french fried	9 oz.	.16	03	03
Baby foods	4½ oz.	1.31	13	15
Sweet pickle relish	12 oz.	.21	07	08
Pretzels	8 oz.	.18	05	05
TOTALS			1652 (100%)	1723 (104%)

APPENDIX B

Comparison of advertised food chain prices

The study described in this appendix supports the conclusions drawn in the main body of the report. A comparison of food prices advertised in Boston and Bangor newspapers gives an indication of differences in prices in the two cities. Two major food chains advertise comparable items on a weekly basis in the *Boston Globe* and the *Bangor Daily News*. These food items, their prices in each city, and the Bangor prices as percentages of the Boston prices are listed in Tables 1 and 2 of Appendix B. The prices were taken from advertisements appearing Thursdays, when the stores list many of their special sales for the week.

Only two chains were compared, and since there is much shopping done in other stores, the possible choices of prices available to the consumer are not fully represented. The food items compared were limited by the items advertised. In addition, no attempt has been made to weight the prices according to the quantities normally purchased by the consumer; only the prices of the quantities advertised are compared. On this basis the comparison lends support to the hypothesis that food prices are generally higher in Bangor than in Boston.

Of the 90 comparable items found in five different weeks, 45, or 50%, were advertised at the same price in each city. Of the remaining items, only 9, or 10%, were priced lower in Bangor while 36, or 40%, of the items were priced higher. All nine of the food items priced lower in Bangor were meats. As indicated in chart 1 the only categories in which Bangor expenditures were lower than Boston expenditures were meats.

Both food chains had more items priced higher in Bangor than in Boston. Food chain "A" had 25 items (54%) advertised at higher prices in Bangor; 5 items (11%) advertised at lower prices in Bangor; and 16 items (35%) advertised at the same price in each city. Food chain "B" had 11 items (25%) advertised at higher prices in Bangor; 4 items (9%) advertised at lower prices in Bangor; and 29 items (66%) advertised at the same price in each city. This was also the pattern when the prices were analyzed on a weekly basis. In all cases the items priced higher in Bangor outnumbered the items priced lower in Bangor.

APPENDIX B

TABLE 1

Advertised Retail Price Comparisons of Selected Foods in Boston and Bangor
FOOD CHAIN "A"

Date	Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
10-14-65	Plate bone-in beef	lb.	37	39	105.4
	Fresh brisket, front cut	lb.	69	79	114.3
	Fresh brisket, straight cut	lb.	99	89	89.8
	Pork chops, center cut	lb.	95	99	104.2
	Pork chops, end cut	lb.	55	59	107.2
	Cooked ham	12 oz.	119	123	103.4
	Sausage meat	lb.	49	59	120.4
	Sharp cheese, Wisconsin aged	lb.	75	79	105.3
	Milk, nonfat, dry	20 qt.	135	129	95.5
	Relish	15 oz.	35	37	105.7
10-21-65	Skinless franks	lb.	65	69	106.2
11-11-65	Cornish hen	lb.	59	65	110.7
	Oyster stew	10 oz.	29	33	113.7
	Fish sticks	10 oz.	39	43	110.2
	Beef liver	lb.	49	45	91.8
	Bacon	lb.	89	95	106.7
	Bacon	lb.	85	93	109.4
	Onions, yellow	10 lb.	49	59	120.4
	Margarine	lb.	39	42	107.7
	Corned beef	lb.	79	79	100.0
	Meat pies (7 pkgs.)	8 oz.	99	99	100.0
	Peas (4 cans)	1 lb. 1 oz.	89	89	100.0
	Mushrooms (3 cans)	3 oz.	100	100	100.0
	Sandwich bags	pkg. of 150	35	35	100.0
	Fish soups	30 oz.	100	100	100.0

APPENDIX B

TABLE 1 (cont.)

Advertised Retail Price Comparisons of Selected Foods in Boston and Bangor

FOOD CHAIN "A"

Date	Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
11-18-65	Sausage	lb.	49	59	120.4
	Frankforts	lb.	65	69	106.2
	Canned ham	3 lb.	319	329	103.1
	Turkey roast	2 lb.	289	279	96.6
	Ice cream	½ gal.	59	69	116.9
	Fruit juices	30 oz.	100	100	100.0
	Grapes	2 lb.	29	29	100.0
12-16-65	Pot roast, boneless	lb.	59	67	113.7
	Stew beef, boneless	lb.	69	79	114.4
	Ground chuck	lb.	67	79	117.9
	Chuck steak, bone-in	lb.	59	57	96.6
	Cut corn, frozen	2 lb.	55	63	114.5
	Strained baby food	4¾ oz.	10	12	120.0
	Sausage	lb.	55	55	100.0
	Grapefruit sections	4 lb.	89	89	100.0
	Corn (6 cans)	12 oz.	100	100	100.0
	Sweet peas, (4 cans)	1 lb. 1 oz.	69	69	100.0
	Sweet potatoes (2 cans)	1 lb. 2 oz.	49	49	100.0
	Corn	1½ lb.	39	39	100.0
	Green beans	1 lb. 4 oz.	39	39	100.0
	Sweet peas, frozen	1½ lb.	39	39	100.0

APPENDIX B

TABLE 2

Advertised Retail Price Comparisons of Selected Foods in Boston and Bangor

FOOD CHAIN "B"

Date	Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
10-14-65	Shoulder roast	lb.	84	83	98.8
	Ground chuck	lb.	58	78	134.5
	Stew beef	lb.	69	78	113.4
	Halibut	lb.	63	68	107.9
	Pork cutlets	lb.	99	99	100.0
	Spare ribs	lb.	59	59	100.0
	Smoked picnics	lb.	49	49	100.0
	Fried fish fillet	14 oz.	49	49	100.0
	Shrimp cocktail (3 jars)	4 oz.	89	89	100.0
	Sliced bologna	lb.	69	69	100.0
	Coffee	1-lb. can	69	69	100.0
	Frozen baked cake	12 oz.	89	89	100.0
	Apple pie	1½ lb.	39	39	100.0
10-21-65	Sliced bologna	12 oz.	59	55	93.2
	Ketchup	1 lb. 4 oz.	25	29	116.0
	Skinless sausage	lb.	65	65	100.0
	Crab legs	lb.	89	89	100.0
	Apricot pie	1½ lb.	49	49	100.0
	English muffins	pkg. of 12	49	49	100.0
	Layer cake		49	49	100.0
	Coffee (3 cans)	1-lb. can	199	199	100.0
	Cake mixes	1 lb. 4 oz.	33	33	100.0

APPENDIX B

TABLE 2 (cont.)

Advertised Retail Price Comparisons of Selected Foods in Boston and Bangor

FOOD CHAIN "B"

Date	Item	Unit	Boston price (cents)	Bangor price (cents)	Bangor price as % of Boston price
11-11-65	Chicken, whole	lb.	26	28	107.6
	Chicken, cut up	lb.	30	32	106.7
	Smelts	lb.	25	23	92.0
	Smoked fillets	lb.	55	53	96.3
	Mashed potato buds	5 oz.	35	37	105.7
	Maple syrup	24 oz.	49	57	116.1
	Hawaiian punch (3 cans)	1 qt. 14 oz.	89	100	112.3
11-18-65	Cranberries	lb.	27	29	107.4
	Bologna	8 oz.	39	39	100.0
12-16-65	Fruit cocktail	4 lb. 4 oz.	88	100	114.7
	Turkey (10-20 lb.)	lb.	43	43	100.0
	Turkey (over 20 lb.)	lb.	39	39	100.0
	Oven roast, boneless shoulder	lb.	89	89	100.0
	Whole potatoes, frozen	2 lb.	39	39	100.0
	Coffee (3 cans)	1-lb. can	219	219	100.0
	Angel food cake	1 lb. 1 oz.	39	39	100.0
	Cherry pie	1½ lb.	39	39	100.0
	Ice cream	½ gal.	69	69	100.0
	Potato chips	lb.	49	49	100.0
	Vienna bread	2 lb.	49	49	100.0
	White bread	1½ lb.	29	29	100.0
	Dark fruit cake	2 lb.	179	179	100.0