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Part II

Farm and Urban Purchasing Power

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The views are the author's own.

SINCE 1938 'PARITY INCOME FOR AGRICULTURE' has been represented by the ratio of the per capita incomes of farm to nonfarm population in 1910–14—the last considerable period of stability before World War I and its aftermath. This period was chosen as the base chiefly because the level of agricultural prices was relatively stable and relatively favorable in comparison with nonagricultural prices, though perhaps the nostalgic remembrance of that period in contrast to the agriculturally depressed 'twenties and early 'thirties was an equally important factor. It was thought of as a period when farmers enjoyed well-being on a par with other population groups. But this impression was purely subjective. Statistical data had not been developed to measure quantitatively the gaps between the economic welfare of farmers and other population groups. Nor would such calculation be of significance now, more than 30 years later and after two world wars. Even if we knew that the well-being of these two groups was equal in 1910–14, or if not, how disparate, we would not know the disparity today. Since the calculation must rest entirely upon relative levels of incomes, unadjusted for differences in price levels for goods bought by farmers and by other population groups, 'parity for agriculture' as measured by 'income parity' may be considerably different from parity of purchasing power or well-being.

Parity is defined here as the income necessary to yield to the farmer a purchasing power approximately equivalent to that of the urban worker. This can be determined only by considering in addition to the incomes received, the level of retail prices for goods bought by farmers compared with the level of retail prices for goods bought by urban wage earners. Retail prices of similar articles vary considerably from area to area, and within areas according to size of community, methods and organization of distribution, frequency and quantity of unit purchases, and other factors. A study of *Intercity Differences in the Cost of Living in March 1935, 59 Cities* (Works Progress Administration, Research Monograph XII, Government Printing Office, 1937) indicated that the cost of a specified standard of living ranged from $1,130 in Mobile, Alabama, to $1,415 in Washington, D. C., a difference of 25 percent. More recently the Bureau of Labor Statistics has constructed an Intercity Index of the relative differences in the cost of equivalent goods, rents, and services in 32 large cities. In its report for

March 1945 the cost of the specified level of living in Seattle, Washington, was 17 percent higher than in Houston, Texas, chiefly because of price differences, but also because differences in clothing and housing requirements due to climate were allowed for. However, the specified level of living cost 8 percent more in Washington than in Baltimore, Maryland, only 40 miles distant, and 11 percent more than in Scranton, Pennsylvania, several hundred miles away. These differences reflect differences in the level of prices. This paper is concerned largely with determining the difference in price levels on farms and in the city.

Perhaps the most serious objection to such an undertaking is that comparisons of the cost of living between groups that have dissimilar standards of living are meaningless. Most of those who have ventured to measure differences in the cost of living have insisted that only groups with similar standards should be compared. Ragnar Frisch imposes the condition that prices should be compared only among 'homogeneous groups'.[1] The International Labour Office insists upon 'comparability'; the measure of comparability is the spread between the levels of one region's standard of consumption in terms of its own prices and in terms of the other region's prices, and the other region's standard of consumption priced similarly.[2] Unless the consumption patterns resemble one another closely, the spreads are likely to be wide. But in the calculations to follow, such spreads are interpreted in the light of differences in the consumption patterns of farm and urban families rather than as prohibiting price comparisons. Perhaps Fisher's 'Ideal Index Number' contributed much to the emphasis on comparable groups in the earlier studies. To construct a reliable index according to this formula the quantities of goods and services priced must be quite similar. In the initial study on international comparisons of workers' living costs in Detroit and fourteen European cities,[3] the method of determining price level differ-

[1] *Methods of Measuring the Relative Cost of Living* (A copy is on file in the library of the Dept. of Agriculture, Washington, D. C., mimeographed, July 1937).

[2] *International Comparisons of Cost of Living* (International Labour Office, Geneva, 1934).

[3] *An International Enquiry into Costs of Living* (International Labour Office, Geneva, 1931).

entials resembled the methods used in this paper with one important difference—the 'ideal' formula was not used here. However, the above-mentioned studies compared prices of goods bought by urban workers in the several countries and this study compares differences between farm and urban prices. While there appears to be no reason for basic differences in the method of measuring the price spread between workers in the different countries or the spread between farm and city, the interpretation of price spreads may seem to have more effect in the one instance than in the other. But the assumption that standards of living of workers in different countries are approximately the same rests on no sounder ground than a similar assumption for farm and city families. Such an assumption is not made in this study. Conditions of living, as a whole, on farms are not like those in cities, although in a narrow area they are more similar than comparisons based on national averages. However, even at the national level certain broad areas of expenditure or consumption are common to both groups. These common areas of the standard of living provide the basis for the price comparisons to follow.

Naturally, the more similar the standards of living, the more reliable the measure. But if this were interpreted narrowly, the opportunities for measurement would be very restricted. By implication, only groups at the same income level, in the same climate, with the same family composition, the same degree of urbanization, and the same opportunities should be compared. It would be surprising if, with these criteria, the price levels were significantly different except primarily because of differences in costs of transportation. Price differences between groups, no matter how qualified, should accompany comparisons of incomes between groups. To interpret the incomes of farmers and of urban wage earners in terms of what they will buy is more significant than merely to compare them.

Price differentials can be expressed either in terms of what the goods and services consumed on the farm would cost the farm family at city prices or vice versa. Standards of living of course differ on farms and in cities. The needs for clothing are simpler on the farm; motor transportation is more pressing; the types of food differ in their importance in the consumption pattern because the

farmer raises a large part of what he consumes. Yet these items are common to the standards of living of both groups. However, many differences in living content are not measurable. The easier access to medical care in the city, better schools, and recreational facilities are all factors yielding a real income to the city dweller. For many of these, increases in income to the farmer would not bring equality with the urbanite. It is doubtful that the advantages of living in the country with the better diet that usually characterizes the farm family counterbalance the advantages of city living. Thus, the comparison of dollar incomes adjusted for differences in price levels tends to understate the actual spread in real income between the two groups.

Scope of the Comparison

The comparison of living costs is based on national averages of prices in farm and urban areas; the incomes too are on a national basis. To be consistent, the two must be treated in the same way. A considerable part of the disparities in income and prices arises from geographical differences. Wages for similar jobs are substantially lower in the South than in the Northeast. Incomes of farmers also are lower in the South than in other regions. Since a large percentage of the farm population lives in the South and of the urban wage earners in the industrial Northeast, a part of the difference in income is obviously due to location. Prices also differ according to geographic areas: prices in the South are low relative to other regions. Since the averages are national, the differences in income due to geographic differences are more or less offset by differences in price levels.

Another approach to the problem would be to compare differences in income and in prices for each of many localities. The differences in each area would then be weighted into the national difference. Such an approach would yield a considerably smaller disparity in income and also in price levels but would probably lead to a conclusion not significantly different from that arrived at by the method followed. The smaller disparity in incomes and price levels would result from the elimination of the effect of the concentration of farmers in the low income and low priced South.

However, this approach requires more data and time than are available at present. The chief advantage would be that the gap between farm and urban standards of living would be narrower, though still wide.

The point of reference for our analysis is 1941, the most recent year for which price data of the kind required and farm and urban standards of living are available. In addition, 1941 represents more nearly than any preceding period the levels of consumption that are in prospect for the future. From the disparity in the cost of living on farms and in urban areas in 1941, the disparity in more recent periods can be gauged with the aid of price series.

Prices of goods and services in cities in 1941 expressed as relatives of prices in farm areas were weighted by the expenditures of farm families to determine the over-all price difference if farm families had paid city prices. Conversely, prices of goods and services in farm areas were expressed as relatives of prices in urban areas and weighted by expenditures of city families to find what the price differential would have been had city families made their purchases in farm areas. The standards of living are too different to admit of the double or 'ideal' index. A straightforward computation of one standard of living in terms of its own and the other group's price level yields a more realistic figure than the two standards of living and the two price levels averaged into one figure.

The Price Data

Unfortunately, data for pricing exactly the same commodity or service in farm areas and in the city do not exist. The principal sources of current prices in urban and farm areas are the Bureau of Labor Statistics and the Bureau of Agricultural Economics. While their indexes of retail prices in cities and in farm areas respectively are satisfactory for their purpose—to indicate changes in the cost of living over time—their use to determine the differential between farm and city prices at any particular moment presents difficulties. Average prices of few commodities and services except foods, as collected by the BLS for its urban price index, have been computed. Moreover, BLS agents use compre-

hensive specifications for each commodity. The BAE, which relies on mailed questionnaires to independent stores servicing the rural population, usually requests the price of the commodity most commonly sold to farmers; for example, the kind of overalls farmers buy. The BLS obtains the prices of four types of overalls, white back denim, and one type of dungarees, blue denim, with detailed specifications as to fabric, construction, and styling. Thus, comparison of these urban and rural price series would probably be vitiated by undeterminable differences in quality.

To supplement them a considerable body of price data was taken from *Family Spending and Saving in Wartime* and the companion study by the Bureau of Human Nutrition and Home Economics, *Rural Family Spending and Saving in Wartime*.[4] From a sample of 3,100 families and single consumers, data on expenditures for living in 1941 and the spring of 1942 were collected. In many instances, expenditures and the number of articles purchased were shown for various income levels. Dividing the expenditure by the number of articles purchased gave an average price. Comparisons of average prices paid by urban and rural farm consumers at all income levels combined derived in this way would be limited in significance, as would be direct comparisons of the BLS and BAE data, because of differences in the quality of the items purchased by these two population groups. Consumers, especially in cities, buy better quality merchandise and pay higher prices as their incomes rise. Average prices for all income levels combined, therefore, obscure big differences in quality, which are reflected in price differentials between farm and city.

However, by determining the prices paid by farmers and by city workers at the lowest significant income levels, \$500–1,000 per city family and \$250–500 per farm family, the effect of quality differentials in price can be minimized for articles in which it is a substantial factor. At these levels of money income, the total income, including non-money income received in the form of housing, food, and fuel as well as net money income received from farming, earnings, and other sources, was \$807 for the farm family[5]

[4] Bureau of Labor Statistics, Bulletin 822, 1945; Department of Agriculture, Miscellaneous Publication 520, 1943.

[5] Including food grown on the farm valued at retail prices to farmers.

and $875 for the urban family. These money income groups were the next above the lowest, which were not chosen for two reasons: there were too few families to yield accurate price data, and probably many families ordinarily had higher incomes, but owing to some extraordinary condition in 1941 their incomes were low. Families tend to maintain their standards of living at the level of the income group to which they ordinarily belong, though some families in the lowest income group live beyond their means by not paying bills. In many instances, prices computed for the lowest income group were higher than prices for the next higher income group.

Prices at the lowest significant income level are not entirely devoid of quality differentials. Some articles of the same quality as those sold to farmers are apparently not available on urban markets. Nevertheless, in general the prices quoted at the lowest income level represent the lowest prices available to both groups. If the farmer purchased these commodities at city prices, he would have to pay at least these minimum prices. Differences in prices reflecting differences in the minimum quality of items available for purchase should not be eliminated from the measurement of the price disparity between groups. They are a part of the price situation and must be taken into account.

Food Prices

Food is the largest item in both city and farm budgets, accounting for about 32 percent of the total cost of living in the city and 38 percent on the farm (farm furnished foods valued at prices received by farmers for similar items). And here the price disparity is biggest, largely because almost two-thirds of the food the farm family consumes is produced on the farm. In this study, foods produced and consumed on the farm were valued at the prices received by farmers for comparable commodities because the farm income data are computed on this basis by the Bureau of Agricultural Economics. In *Rural Family Spending and Saving in Wartime* farm produced foods were valued at prices farmers would have to pay for similar items, a level approximately double the farm price level. Farm incomes were increased correspondingly. It does not matter for the purposes of this analysis which pro-

cedure is followed, as long as it is consistent with the method used in calculating farm income.

In the BLS and the BAE data the influence of quality on price differentials was not marked in the case of foods. The prices of most important foods, such as bread, flour, sugar, apples, milk, and canned tomatoes, calculated from expenditures and quantities purchased in the spring of 1942[6], were constant at all levels of income. For some foods, such as choice cuts of meats and butter, the average price per unit tended to rise slightly with incomes.

Average prices in 1941 for 17 foods purchased by farmers (priced at retail levels) and 15 foods important in farm production for home consumption (priced at prices received by farmers for similar items) were compared with urban retail prices. These foods represented about two-thirds of the average city family expenditures for food in 1941 and about 85 percent of the value of food consumed by the farm family. The over-all price differential between the farm and the city was computed by weighting price relatives by their importance in the farm and urban budgets in 1935–39. Weights based on 1941 were not available for individual commodities. Satisfactory weights, based on quantities consumed in 1935–39, were developed by both the BAE and the BLS for use in constructing their retail price indexes. The weights for the BLS index were based largely on the *Study of Money Disbursements in Large Cities of Wage Earners and Lower Salaried Clerical Workers, 1934–36;* those for the BAE index on the *Study of Consumer Purchases, 1935–36*, a forerunner of the 1941 study. The prices of individual foods, therefore, were combined on the basis of 1941 expenditures for quantities consumed in 1935–39. While this procedure was dictated largely by expediency, it seems preferable to using weights that might have been worked out with much effort for the spring of 1942 which would have been open to criticism because of the seasonal influence of these three months.

If farm families had purchased their food at city prices, the cost would have been 67 percent higher in 1941, chiefly because home produced foods were valued at prices received by farmers for

[6] *Family Food Consumption in the United States*, Department of Agriculture, Miscellaneous Publication 550.

comparable items (Table 1). The cost of purchased foods alone would have been 10 percent higher.

TABLE 1
City Prices of Foods Expressed as Relatives of Prices to Farm Families, 1941

	City price as relative of price to farm family	Weight based on farm family expenditures & value of farm-furnished foods
		%
Purchased foods at retail prices paid by farmers		
Apples	109	1.6
Bacon, sliced	114	1.8
Bananas	97	1.3
Bread, white	94	5.8
Butter	105	5.0
Cheese	100	1.6
Coffee	106	3.4
Cornmeal	174	1.1
Flour, wheat	125	5.2
Lard	98	3.4
Oranges	115	.8
Pork, chops	124	5.7
Rice	105	1.7
Rolled oats	106	.3
Sugar	95	6.0
Steak, round	117	6.5
Tea	94	.6
Farm-furnished foods at prices received by farmers for like items		
Apples	272	1.2
Beef	161	1.2
Butter	134	5.0
Cabbage	394	.3
Chickens	184	5.8
Cornmeal	328	.9
Dry beans	197	.3
Eggs	162	6.8
Flour	253	.5
Milk	282	11.2
Onions	296	.5
Pork	263	10.1
Potatoes	230	1.7
Snap beans	222	1.4
Sweet potatoes	291	1.3
Total	167	100.0

If city families had purchased their food at prices prevailing in farm areas, the cost would have been 28 percent less in 1941

(Table 2). The calculation based on the farm budget yields a 40 percent smaller cost on the farm than in the city. The narrower differential when city consumption is priced is due to the heavier urban consumption of items that are also purchased on farms.

TABLE 2

Food Prices to Farm Families as Relatives of City Prices, 1941

	Price to farm family as relative of city price*	Weights based on city family expenditures
		%
Apples	55	2.5
Bacon	88	2.1
Bananas	103	2.0
Beef	93	13.5
Bread	106	8.3
Butter	84	7.5
Cheese	100	2.2
Coffee	94	3.3
Cornmeal	42	.4
Flour	74	2.4
Lard	102	1.1
Oranges	87	3.8
Pork	48	7.8
Rice	96	1.2
Rolled oats	95	.3
Sugar	105	4.5
Tea	106	1.1
Milk	36	15.2
Chickens	54	4.1
Eggs	62	7.8
Potatoes	44	3.9
Sweet potatoes	34	.5
Dry beans	51	.5
Snap beans	45	1.2
Cabbage	26	1.0
Onions	35	1.8
Total	72	100.0

* Prices to farm families are retail prices to farmers, prices received by farmers, or a combined average price based on both the retail price and the price received by farmers, and weighted by the proportion of the total consumption represented by foods purchased and produced.

Farm consumption is heavier in items the farmer produces; for example, the farm family buys more flour than bread; the city family more bread than flour. Bread prices were 6 percent higher on the farm than in the city but prices of flour, after including flour from wheat grown on the farm, were 26 percent lower on the farm than in the city. Similarly, farm consumption was heavier in milk, eggs, meats, poultry, vegetables, and fruits, most of which

were produced on the farm where consumed. This heavy consumption of farm produced foods gave farm families more satisfactory diets, particularly in food energy, protein, and calcium.[7]

Clothing Prices

In clothing, the influence of differences in quality between articles purchased by farmers and by city workers is marked. In *Family Spending and Saving in Wartime* it is noted that average prices paid by city workers increased more as incomes increased than did prices paid by farmers. Consequently, when average prices based on all expenditures are compared, the spread between city and farm prices is substantially wider than when prices at the lowest significant income levels are compared.

Prices of 24 articles, accounting for 57 percent of average farm family expenditures and 50 percent of average city family expenditures for clothing, were computed. As in the preceding section, prices of articles in the city were expressed as relatives of the price to farmers and weighted by percentages reflecting the importance of the expenditure of each item in the total farm family expenditure for clothing (Table 3). Had farm families purchased their clothing in 1941 at city prices, the cost would have been 29 percent higher. Conversely, had city families purchased their clothing at prices prevailing in farm areas, the cost would have been 25 percent less. Owing to the heavier proportional purchases of dress clothes, the computation based on city purchases indicates approximately a 3 percent wider spread in the general clothing price level differential than the comparison based on expenditures of farm families for clothing. If average prices for the 24 clothing items based on all income levels combined are compared, prices in the city are 40 percent above the level in farm areas based on the farm purchasing pattern. This wider differential reflects the faster increase in the quality of an item purchased in the city as income increases.

Fuel, Light, and Refrigeration Prices

Farm and urban prices for only three items in this group can be compared: bituminous coal, anthracite coal, and electricity. The

[7] *Ibid.*, p. 23.

city prices are the average retail prices for 1941 reported by the Bureau of Labor Statistics and used in its consumers' price index. For prices at the farm, coal prices are those published by the

TABLE 3
Clothing Prices, Farm and City, 1941

	City price as relative of price to farm family	Weights based on farm family expenditures	Price to farm family as relative of city price	Weights based on city family expenditures
		%		%
Men's				
Suits, heavy wool	124	6.4	81	10.4
Suits, light wool	207	4.4	48	8.3
Trousers, wool	117	2.4	85	2.8
Trousers, cotton, & linen	122	2.7	82	1.4
Overalls	106	8.5	95	1.7
Overcoats	142	2.1	70	3.9
Shoes, work, leather	111	6.7	90	2.7
Shoes, other, leather soles	131	5.8	76	6.9
Hose, cotton, dress	111	1.7	90	1.7
Hose, cotton, heavy	111	1.8	90	.9
Shirts, cotton, work	115	5.3	79	1.6
Shirts, cotton, other	129	3.3	77	4.7
Unionsuits, cotton, knit	84	2.4	119	.6
Hats, felt	136	3.0	74	2.5
Women's				
Dresses, rayon	164	6.9	61	11.7
Dresses, cotton, street	135	3.5	74	4.0
Dresses, cotton, house	100	2.6	100	1.2
Cloth coats, heavy, no fur	129	4.7	78	3.9
Cloth coats, light wool	138	3.3	73	4.8
Shoes, leather, with leather soles	144	11.8	69	11.3
Hose, silk	100	4.0	100	6.3
Slips, rayon, & silk	113	2.0	88	2.4
Pants, rayon, & silk	97	1.3	103	1.3
Yard goods, cotton	128	3.4	78	3.0
Total	129	100.0	75	100.0

Based on prices paid by low income groups derived from *Studies of Wartime Spending and Saving.*

Bureau of Agricultural Economics and used in its index of prices paid by farmers. The rates for electricity on the farm are rates charged by Rural Electrification Administration-financed distributors. These three items represent 62 and 55 percent respectively of the average total cost of fuel, light, and refrigeration to farm and urban families in 1941.

Based on farm purchases, fuel and electricity would have cost 17 percent less in the city. Based on city purchases, the cost on the farm would have been 25 percent more (Table 4). A difference of about 3 percent in the over-all spread between farm and urban prices is due to variation in weightings.

An important gap in the price data for fuel, light, and refrigeration is in farm-furnished fuel and ice, almost 40 percent of the total expenditure for this group. Part of the higher level of prices indicated on the farm would disappear if prices of farm-furnished wood were available.

TABLE 4

Fuel, Light, and Refrigeration Prices, Farm and City, 1941

	City price as relative of price to farm family	Weights based on farm family expenditures	Price to farm family as relative of city price	Weights based on city family expenditures
		%		%
Bituminous coal	100	31.0	100	24.4
Anthracite coal	82	13.3	122	23.0
Electricity, 100 kw.h.	73	55.7	138	52.6
Total	83	100.0	125	100.0

City prices are retail prices reported by the BLS. Coal prices to farmers are those computed by the BAE. Electricity rates on the farm were furnished by the Rural Electrification Administration.

FURNITURE AND FURNISHINGS PRICES

Prices of furniture were obtained from *Family Spending and Saving in Wartime* in similar fashion to the prices of clothing. Average expenditures were divided by the number of articles purchased at the lowest significant income levels. For a few items the number of purchases was so small that it was necessary to use the next higher income level to obtain significant price data. Consequently, the prices of furniture are considered less reliable than the clothing prices. However, the influence of quality on price differentials for most furniture and furnishings is not as great as for clothing.

The 22 articles for which prices were computed represented about half of average farm family expenditures on furniture and

about 40 percent of city family expenditures. A more mixed pattern characterizes furniture and furnishings than the commodity groups considered above, where prices of individual items were predominantly higher or lower for one population group than for the other (Table 5). Priced at the city level, farm purchases cost 6 percent more in 1941. And priced at the farm level, city purchases cost 2 percent more, largely because of the heavier proportional urban purchases of electric refrigerators which apparently cost the farm family more.

TABLE 5
Furniture and Furnishings Prices, Farm and City, 1941

	City price as relative of price to farm family	Weights based on farm family expenditures	Price to farm family as relative of city price	Weights based on city family expenditures
		%		%
Electric refrigerator	79	25.6	127	31.3
Stove, kerosene or gas	89	12.5	113	14.1
Stove, coal or wood	89	8.1	113	2.8
Table, small	119	1.6	84	.5
Chair, other than upholstered	169	.6	59	.5
Bath towel	124	1.6	81	2.0
Sheets	126	5.0	79	5.1
Pillow cases	145	1.6	69	1.5
Blankets, 50% or more wool	114	2.2	88	3.0
Blankets, less than 50% wool	115	1.9	87	1.5
Mattress, inner spring	171	5.0	58	4.0
Mattress, other	222	2.2	45	.5
Washing machine, electric	113	6.5	88	7.1
Electric iron	101	.9	99	1.5
Sewing machine, electric	121	1.6	82	5.1
Living room suite	148	6.9	67	9.6
Dining room suite	91	2.2	109	.5
Bed room suite	85	6.2	117	4.6
Wooden beds	93	.9	107	1.0
Metal beds	134	.6	74	.5
Bedsprings	89	1.6	113	1.5
Wood heating stove	102	4.7	98	1.8
Total	106	100.0	102	100.0

Source same as for Table 3.

HOUSING COSTS

Data to yield a reliable estimate of the price differential in housing between farm and urban areas are lacking. Housing on the farm

and in the city differ radically. According to the *1940 Census of Housing*, the median rental value of tenant-occupied rural farm dwelling units was $4.72 per month; of tenant-occupied urban dwellings, $24.60. Fewer than 2 percent of the tenant-occupied farm dwellings with rental values near the median had running water. Fewer than 2 percent of the city dwellings with rental values near the median did not have running water. Even at the highest rental values on the farm, over $75 per month, about 40 percent of dwellings were without running water. On the other hand, about 40 percent of dwellings with rental values in the city of $5–9 per month were also without running water. Differences in the number of rooms, availability of electricity, and other factors also contribute to differences in rent.

In short, the differences in housing facilities between the farm and the city are too great to admit of a common base for comparing prices. The differential between the median monthly rentals $4.72 on the farm and $24.60 in urban areas, seems to be due largely to quality. In view of the inadequacy of the data, it was assumed that there was no price differential for housing between the farm and city.

Medical Service Rates

The level of prices of medical care cannot be compared because information on rates is lacking. However, the Study of Consumer Purchases gives a clue to the price differentials in 1935–36. A comparison of physicians' fees for office visits and home calls and hospital charges per day for Pennsylvania-Ohio farmers and small cities in the surrounding North Central Region indicates that the costs were 14 percent higher in small cities than in farm areas.[8] The differential would probably be wider if farm areas in the United States as a whole were compared with urban areas. Based on the distribution of expenditures in small cities, the cost of medical care in farm areas was 10 percent less (Table 6). Physicians' fees and hospital charges accounted for about 40 percent of total expenditures for medical care for both farm and city families.

[8] Department of Agriculture, Miscellaneous Publication 402.

TABLE 6
Medical Service Rates, Farm and City, North Central Region, 1935–1936

	City rate as relative of rate to farm family	Weights based on farm family expenditures	Rate to farm family as relative of city rate	Weights based on city family expenditures
		%		%
Physician, office visit	134	33.4	75	43.5
Physician, home visit	92	33.3	109	23.9
Hospital rate	117	33.3	85	32.6
Total	114	100.0	90	100.0

From Study of Consumer Purchases, 1935–36.

COSTS OF PURCHASE AND OPERATION OF AUTOMOBILES

The comparison is based on the price of gasoline and of a new Ford automobile. Expenditures for gasoline accounted for about half of the cost of operating the automobile and purchases of new cars for about half of the total expenditure for automobiles in 1941. Prices for both gasoline and automobiles were higher on the farm; for automobiles because of the higher transportation cost from the factory, and for gasoline principally because of the higher state taxes in southern states. Based on farm purchases, the price level for automobiles and gasoline was 4 percent lower in the city. Based on city purchases, the level of prices was 5 percent higher in farm areas (Table 7).

TABLE 7
Prices of Gasoline and Automobiles, Farm and City, 1941

	City price as relative of price to farm family	Weights based on farm family expenditures	Price to farm family as relative of city price	Weights based on city family expenditures
		%		%
Gasoline[a]	95	52.9	106	54.0
Automobile[b]	97	47.1	103	46.0
Total	96	100.0	105	100.0

[a] BAE retail prices for prices paid by farmers. For city prices, the reported retail price of gasoline in 52 cities (American Petroleum Institute) plus tax.
[b] Based on price of Ford car.

Other Groups of Commodities

The groups of commodities and services so far considered accounted for 85 percent of the total cost of living on farms and 82 percent of that in cities. The other chief groups consist of household operations (excluding fuel and electricity), mainly paid household help and laundry; recreation; and personal care. For these items no price data are available by which farm and city costs can be compared. Probably, on the whole, these groups of commodities would cost somewhat more in the city. Paid household help, cinemas, barber and beauty services in general cost more in urban areas. For other minor groups including tobacco, books and periodicals, and education, the difference in costs is due largely to quality. For all these groups combined, it is assumed that the urban level is 10 percent above the farm level. Ten percent higher or lower prices for these groups would change the differential for all goods and services only 1 percent.

Price Levels

The above computations of price level differentials for each group of commodities and services were combined by weighting the city price level as a relative of the farm price level by the percentage the expenditures for the specific group is of the total cost of living on the farm. In similar fashion, the farm price level for a group of commodities expressed as a relative of the city price level was weighted by the percentages for urban expenditures (Table 8).

Had farm families purchased the goods and services they consumed in 1941 at city prices, the cost would have been 30 percent higher. Conversely, had urban families purchased their standard of living at prices prevailing in farm areas, they would have paid 12 percent less. As indicated, the difference in spread reflects the difference in the patterns of living.

The arbitrariness of assuming price differentials for some groups based on inadequate or nonexistent data may be objected to. However, the data for food, clothing, fuel and electricity, and furniture and furnishings, accounting for 59 percent of the farm budget and 54 percent of the urban budget, seem adequate. If the calculation were based on these groups only and no price differential for

the other groups assumed, the city price level would still be 28 percent above the farm and the level on farms 10 percent below the city level.

TABLE 8
Price Levels, Farm and City, 1941

	City prices as relatives of farm[a]	Farm expenditure weights[a]	Farm prices as relatives of city[b]	City expenditure weights[b]
		%		%
Food	167	38	72	32
Clothing	129	11	75	11
Housing	100	14	100	19
Fuel, light, & refrigeration	83	5	125	6
Furniture & furnishings	106	5	102	4
Operation & purchase of automobile	96	8	105	7
Medical services	114	5	90	5
Miscellaneous	110	14	91	16
Total	130	100	88	100

[a] Based on the farm standard of living at farm operator's average income level.
[b] Based on the city standard of living at factory worker's average income level.

INCOMES OF FARM OPERATORS AND EARNINGS OF FACTORY WORKERS, 1941

According to the Bureau of Agricultural Economics, the ratio of income per person on farms, including family workers and hired hands, to income per person not living on farms in 1941 was equal to the 1910–14 ratio.[9] In other words, income received from farming equaled income from other pursuits. It would seem more appropriate to compare the income of a farm operator with the earnings of a worker in some major industrial group. The more nearly similar the population groups compared, the more meaningful the interpretation. It is also desirable to define the groups compared in accordance with the price data available for determining price level differentials. The price data described in preceding sections are for farm families and moderate income wage earners in large cities. As data on the cost of living for farm laborers and for the rural nonfarm population are inadequate, the following comparison of incomes is based on the income per farm operator and average annual earnings of factory workers.

[9] *The Farm Income Situation*, BAE, June 1946.

In 1941 the net income per farm operator from farming and government payments was $1,062.[10] Unpaid family labor must be adjusted for. In 1941 there were 7,829,000 unpaid family workers on 6,077,000 farms. If each, because of age, sex, and less than full-time employment, does half the work accomplished by the farm operator, family employment on farms represented 1.144 'farm operator equivalents'. The income per farm operator adjusted in this manner to account for unpaid family labor amounted to $928 in 1941.[11]

Average weekly earnings of factory workers in 1941, as estimated by the Bureau of Labor Statistics, were $29.58. Annual earnings, allowing two weeks for vacations and illness, were $1,479.[12] To eliminate the disparity in income, $551 per capita, the farm operator's income would have to be raised 59 percent. However, as indicated, part of the disparity in income is offset by the disparity in price levels. The cost of the average farm family standard of living in 1941 would have been 30 percent higher in the city. At the income designed to yield purchasing power equality to the farm family as compared with the city worker, the price disparity is lessened. The proportion of total expenditures for food, for which the disparity is widest, would be smaller at the higher level of income and expenditures. Based on the distribution of expenditures at the higher income level, the price disparity is computed in Table 9.

The use of group budget weights for the higher income and expenditure levels reduces the price disparity from 30 to 27 percent. The disparity would probably be reduced somewhat more were account taken of the probable shift in the consumption pattern within each group if farmers' incomes were increased. Some additional refinement on this score would be desirable, but in view of the stability of the estimate of the price level disparity, it is not deemed essential.

[10] *Ibid.*

[11] Includes income in kind from the farm in the form of food, housing, and other items used in living furnished through operation of the farm.

[12] It would be desirable to use average annual earnings of a typical factory worker if they were available. Unemployed factory workers are not included in the above calculation of average weekly earnings.

Another qualification should be mentioned. The adjustment of the budget weights reflects the expenditures of farm families and of city families at incomes equal to the assumed higher or lower levels. However, standards of living tend to lag behind incomes. Higher incomes are not immediately reflected in increased expenditures distributed in the same manner as expenditures of families who are already at that income level. Similarly on the decline, expenditures are not fully adjusted downward. If incomes of farm families were increased to 'parity' with incomes of factory workers, the distribution of expenditures would probably not be the same as that of farm families actually having that income, but would probably be between their former level and the assumed level.

TABLE 9

Price Levels for a Standard of Living on Farms Approximately Equal to the City Standard, 1941

	City prices as relatives of farm	Farm expenditure weights
		%
Food	167	33
Clothing	129	11
Housing	100	13
Fuel, light, and refrigeration	83	5
Furniture and furnishings	106	7
Operation and purchase of automobile	96	12
Medical service	114	6
Miscellaneous	110	13
Total	127	100

After accounting for differences in price levels, the incomes of farm operators would have to be increased 25 percent in 1941 to yield approximately the same purchasing power as the employed factory worker had in that year.[13]

Conversely, we may determine the decline in factory earnings that would bring the purchasing power of factory workers down

[13] The computation is as follows: Income ratio = $\frac{\text{Factory earnings, \$1,479}}{\text{Income of farm operators, \$928}}$ = 1.59; Price ratio = $\frac{\text{City, 127}}{\text{Farm, 100}}$ = 1.27; $\frac{\text{Income ratio, 1.59}}{\text{Price ratio, 1.27}}$ = 1.25, adjusted income ratio.

to the farm level. Adjusting the city budget weights to reflect the lower level of income and expenditures, the price disparity is computed as in Table 10.

Adjusting the budget weights to reflect the lower income for city workers does not change the price disparity as computed previously. Factory earnings would have to be 28 percent less in 1941 to lower the standard of living of factory employees to the standard of living on farms.[14]

TABLE 10

Price Levels for a Standard of Living in Cities Approximately Equal to the Farm Standard, 1941

	Farm prices as relatives of urban	City expenditure weights
		%
Food	72	33
Clothing	75	10
Housing	100	22
Fuel, light, and refrigeration	125	5
Furniture and furnishings	102	4
Operation and purchase of automobile	105	6
Medical service	90	4
Miscellaneous	91	16
Total	88	100

PRICE AND INCOME COMPARISON IN 1945

Comparisons of the incomes of farm operators and of factory workers in other years should be accompanied by similar calculations for price level disparities. The price level disparity should be stated in terms of the standards of living of farm operators and of factory workers in each year. But data for the consumption pattern of these groups are not made available currently and, as already indicated, the current collection of prices for use in the several indexes of the cost of living are not satisfactory for computing price level differentials for a certain period. The major objection to using retail price indexes to indicate the trend in the

[14] Income ratio $= \frac{\text{Income of farm operators, \$928}}{\text{Factory earnings, \$1,479}} = .63$; Price ratio $= \frac{\text{Farm, 88}}{\text{City, 100}} = .88$; $\frac{\text{Income ratio, .63}}{\text{Price ratio, .88}} = .72$, adjusted income ratio.

price level differential since 1941 is that the consumption pattern used in computing the index is for 1935–39 for the BLS index of consumer prices and for 1924–29 for the BAE index of prices paid by farmers. In 1945 standards of living of both farm and city groups were undoubtedly significantly different from what they were in 1941 or in the base periods for the price indexes. Data on wartime consumption are not yet available. These indexes can indicate only roughly the price disparities in 1945 as compared with 1941 and are so offered here.

The disparity in price level between the farm operator and the city worker was considerably wider in 1941 than in 1945. Prices of foods consumed on the farm where produced, which make up a substantial part of total food consumption on the farm, increased much more rapidly than prices of purchased food. Prices of clothing in farm areas increased more rapidly than in cities because the low priced articles commonly bought on farms disappeared. Thus, part of the advance in clothing prices is due to an improvement in quality. But, since the lower quality article was no longer available for purchase, this is appropriately part of the actual increase in prices.

Based on the price changes from 1941 to 1945 indicated in the BLS and BAE indexes of food and clothing prices, these group price differentials were adjusted to indicate what the differentials were in 1945. Because comparable data are lacking, no change was assumed for the other groups. Since differentials in the prices of food and clothing largely determine the total price differential, changes in price differentials for the other groups, which would probably be much less marked, would have little effect on the total. The expenditure weights reflect the increased incomes in 1945 and were adjusted arbitrarily to account for scarcities due to war.

From 27 percent in 1941 the price spread based on farm purchases was reduced to 18 percent in 1945 and that based on the urban standard of living was reduced from 12 to 7 percent (Table 11).

The average income per farm in 1945 was $2,251.[15] After ad-

[15] *The Farm Income Situation,* June 1946.

justment to exclude unpaid family labor, the average income per farm operator was $1,946. Average annual earnings per employed factory worker in 1945, as estimated by the Bureau of Labor Statistics, was $2,220, 14 percent above the farm operator's earnings.

TABLE 11
Price Levels, Farm and City, 1945

	City prices as relatives of farm[a]	Farm expenditure weights[a]	Farm prices as relatives of city[b]	City expenditure weights[b]
		%		%
Food	146	32	82	32
Clothing	115	13	87	11
Housing	100	13	100	19
Fuel, light, & refrigeration	83	5	125	6
Furniture & furnishings	106	7	102	4
Operation & purchase of automobile	96	10	105	7
Medical service	114	6	90	5
Miscellaneous	110	14	91	16
Total	118	100	93	100

[a] Based on the farm standard of living at farm operator's average income level.
[b] Based on the city standard of living at factory worker's average income level.

Since living was 18 percent more expensive in the city in 1945, the incomes of farm operators were 3 percent above parity with the earnings of employed factory workers.[16]

For the urban standard of living, however, the reverse is indicated. Factory worker earnings were 5 percent above parity with the incomes of farm operators.[17]

According to rather rough calculations, the incomes of farm operators and earnings of employed factory workers were approximately at parity in 1945.

[16] Income ratio $= \frac{\text{Factory earnings, \$2,220}}{\text{Income of farm operators, \$1,946}} = 1.14$; Price ratio $= \frac{\text{City, 118}}{\text{Farm, 100}} = 1.18$; $\frac{\text{Income ratio, 1.14}}{\text{Price ratio, 1.18}} = .97$, adjusted income ratio.

[17] Income ratio $= \frac{\text{Income of farm operators, \$1,946}}{\text{Factory earnings, \$2,220}} = .88$; Price ratio $= \frac{\text{Farm, 93}}{\text{City, 100}} = .93$; $\frac{\text{Income ratio, .88}}{\text{Price ratio, .93}} = .95$, adjusted income ratio.

Conclusions

Differentials in price levels between population groups are an essential adjunct to comparisons of income, just as a comparison of incomes of the same population group over time must be considered in the light of changes in the cost of living. There is no fundamental difference in the methodological requirements for measuring price changes for one group over time and price differentials for a specific period between population groups. The price determinations must be made for a certain standard of living, the selection of which depends upon the problem at hand.

To determine the income necessary to give the farm operator a standard of living approximately equal to that of the city worker, price comparisons should be based on the goods and services the farm family buys. Under no practical considerations of income will the farm family have a standard of living exactly equal to that of the city family. The necessities and the opportunities are too different. Housing as it is commonly available in the city is for all practical purposes nonexistent in farm areas. If farm incomes were at parity, the differential in the cost of housing between farm and city would be available to the farm family for spending on other commodities or services or for savings. According to *Family Spending and Saving in Wartime*, farm families began to save in 1941 at an income level about 55 percent below that of city families.[18] About half of the difference is accounted for by price differentials; the remainder represents living items the city family has that the farm family does without in order to save. It is much easier for farm families to save, partly because some items such as modern housing are not available and partly because farm expenditures for living, beyond essentials, compete with business expenditures for capital improvements. Thus, the expression of equal opportunities for living should include opportunities for saving as well.

One important weakness of this analysis lies in the paucity of data for the comparison. It would be desirable to compare more commodities and services, but prices of only 87 items were avail-

[18] After adjustment to price farm furnished food at prices received by farmers.

able. For several broad areas of expenditures, price level differentials were rather arbitrarily assumed, although for the major expenditure groups, food and clothing, data are sufficient to reflect with some degree of accuracy the over-all differences in prices.

In addition, the prices collected by the Bureau of Agricultural Economics and the Bureau of Labor Statistics should be brought into closer agreement. To eliminate quality differentials, specifications for the items priced should be the same for both Bureaus as far as feasible. The data would be no less satisfactory for current indexes of prices and would yield far more satisfactory comparisons between farm and city groups.

Whenever possible, price differentials should be based on the standards of living in a particular year. In periods of rapidly rising or falling incomes the goods and services consumed change considerably. Wartime shortages made for a markedly different pattern of living in 1945 than in 1941. For this reason, the conclusion for 1945 is suspect.

The income data also could be strengthened: on the farm side by excluding small part-time farms with the income from agriculture accruing to them; on the urban side by including the unemployed in deriving average annual earnings of all factory workers, if the data were available. Thus, the true disparity in income may be less than indicated. On the other hand, the price disparity may be somewhat less than the data suggest. The gaps in price series are chiefly for nonessential items and probably the price disparity is not as wide for items such as jewelry and quality clothing as for the basic items covered. Thus, a lower income ratio would be offset by a lower price ratio. It is not believed that these refinements would alter the results significantly but they would be desirable for substantiation.

A major point yet remains to be clarified. How large an area of common expenditures is requisite for a price comparison between population groups to be significant? This is not determinable merely by designating a minimum percentage of the total value of living covered in the comparison, although the larger the percentage covered, the more secure the comparison. From the latter viewpoint, there would appear to be support for the farm-city com-

parison. Despite the differences in housing, educational, and other facilities, the major part of expenditures is for like items. To compare the cost of living on farms with that in cities in the same year is just as reasonable as to compare the cost of living in the city or on the farm in different years. Certainly the change in the content of living during the last twenty years has been at least as great as the present difference between farm and city.

Any price comparison between groups is as valid as an income comparison and any price comparison undertaken as an adjunct to income comparisons seems better than no price comparison at all. However, an effort must be made to close the gaps in the data. In general, each problem of price comparison must be judged on its own merits.

Comment

MARGARET G. REID

Two of the major problems involved in measuring the relative costs of living in different environments are: What goods make for equivalence? What items, of what kind and in what quantity, and what prices would measure the relative costs of the equivalence?

I General Concepts and Problems

A The Nature of Equivalence

To measure differences in the purchasing power of two groups of families, some element must be held constant. If the standard of consumption, i.e., the things families want, and the consumption pattern, i.e., the things they buy, are similar, one budget priced in the two markets is sufficient. One figure for relative purchasing power is thereby obtained. But, it is generally felt that differences in both the consumption standard and the consumption pattern of farm and urban families render this method unsuitable. Hence a budget for each situation is requisite, taking into account differences in needs, customs, market supplies, and prices. The budgets should presumably represent equivalent consumption in that the same welfare in its broadest sense is provided. In developing such budgets, the items and both their quality and quantity are important. When the two budgets have been set up, each can be priced in its respective market and the costs compared, yielding a single measure of relative purchasing power or cost. A crude approximation to this method was used in *Intercity Differences in the Cost of Living in March 1935, 59 Cities;* and explorations along this line are essential to a comprehensive investigation of differences in costs of living of farm and of urban families. In fact, the value of any measure of relative costs of living depends largely upon the degree to which it indicates relative costs of the same level of welfare.

Mr. Koffsky, on the contrary, selected two budgets—one for farm and one for urban families—and got prices for lists of goods in the two markets. He derived two measures of relative purchasing power—one for the farm, the other for the urban budget. The farm budget cost 27 percent more at urban than at farm

prices; but the urban budget cost only 14 percent more at urban than at farm prices. For food the difference between the relative costs of the two budgets is striking: the farm food budget cost 67 percent more at urban than at farm prices, whereas the urban food budget cost only 39 percent more.

These differences in relative cost according to what budget is used raise many questions. For example, if two budgets providing 'equivalent' consumption were each priced in its own market, would the measure of relative cost derived from them fall between Mr. Koffsky's two measures of relative cost or would it fall outside? If it fell between them, they would be useful in indicating the limits of the relative costs of living of farm and urban families If the range were wide, little knowledge would, of course, be gained from them.

The wide difference in the cost of food according to the set of weights used is especially challenging since food is the major factor causing differences in the relative costs of the two budgets in general. The significance of this difference should be considered. For example, farm families have a relatively high consumption of home-produced foods, for which the cost is low. It seems improbable, however, that farm families would eat these foods if they had to pay urban prices for them. Accordingly, the use of farm weights in measuring relative cost probably overstates the advantage farm families have with respect to food adequate in nutritive quality and well within a pattern of customary food consumption. Is it realistic to measure relative cost by pricing a budget in the environment where it is common and in another where no one lives on it?

Even though Mr. Koffsky did not set up and price two equivalent budgets in their respective markets, it is of interest to examine his method and the data available with such a budget in mind. Only limited attention is given to the problem of equivalent budgets for the two groups of families. The process of pricing such budgets would, however, have much in common with the type of price comparison used by Mr. Koffsky.

The relative qualities of selected items are a major issue in measuring price differences as well as the relative costs of equiva-

lent consumption. In the absence of evidence to the contrary, it seems best to assume that farm and urban families, to have equivalent consumption, would have to buy much the same quality even if not the same quantity.

B THE SELECTION OF ITEMS TO MEASURE THE COST OF EQUIVALENCE

1 *Items*

Even after suitable budgets have been prepared, one cannot afford the time and labor involved in pricing all items. But if the data are available, the interrelation of the prices of many items should be investigated. The items included by Mr. Koffsky were all or most of those for which retail prices were available. When Mr. Koffsky used prices from family studies, he selected only certain items and does not discuss the criteria. We indicate in Section II A the probable effect in the case of food of the limited selection due to the use of retail prices alone.

Omission of items that are important in one situation and not in another may have a marked effect; for example, the omission of both gas and wood from the fuel budgets (see Sec. II D 2).

2 *Prices used*

Because the various types of price have not been compiled with the aim of measuring the relative costs of living of farm and urban families, it is not surprising that they have certain shortcomings. Retail prices designed to measure changes over time are not likely to be completely suitable for measuring differences between groups at one time; nor are family data collected to get facts on expenditures for relatively broad groups of items likely to be completely suitable sources of prices for goods of similar quality in different markets.

Anyone attempting to measure differences in prices paid for similar goods by farm and urban families would be appalled at the few prices available and at their unrepresentativeness with respect to both families and retail outlets and the kind of items covered. Furthermore, little is known about the quality of the items for which prices are available. Until price data more suited

to the purpose are collected, those now at hand must be interpreted in the light of their deficiencies. In addition, other indicators of relative prices may be resorted to; for example, relative wages of certain workers, which can be assumed to indicate the relative cost of the services they provide, and relative retail and other marketing costs and margins.

With respect to families represented, the comparisons of food prices are between farm and large-city families, whereas most other price data are for farm and all urban families. With respect to retail outlets, the Bureau of Agricultural Economics collects food prices only from independent retailers. Bureau of Labor Statistics food prices, on the other hand, include chain store prices.

Farm sale prices present special problems. In measuring the relative purchasing power of the income of farm and of urban families the same prices must be used in determining income and in measuring relative cost. There is no reason, however, except convenience why such prices cannot be those most suitable for measuring the relative costs of consumer goods.

Mr. Koffsky says merely that prices received by farmers were used. Various prices might be taken from BAE reports. For example, the average annual sale prices for the United States published in *Agricultural Statistics* are weighted from month to month or state to state by sales or production. Prices for some foods as well as the percentages of the total product consumed on farms differ considerably from state to state. Data are available on the quantities of these foods consumed by households on farms where they are produced and their sale prices weighted by the farm consumption yield different prices. The value per pound of that consumed as a percentage of the value of that sold for a few foods in 1942 is corn, 119; wheat, 109; cherries, 104; apples, 97; and chickens, 99.

Milk presents a special problem. The average value per 100 pounds of milk equivalent sold as milk or cream during 1942 was $2.38. This value does not allow for the skimmed milk that remained on the farm. If this skimmed milk is valued as feed for livestock the average value of the milk sold as milk or cream or

used for feed is $2.52, not $2.38.[1] Since when the family drinks milk, there is no skimmed milk left for feed, $2.52 seems more appropriate than $2.38 as the cost of milk and cream consumed. If prices on this basis for each state are weighted by consumption rather than sales, the value per 100 pounds of milk consumed is $2.64, 11 percent more than the commercial sale price, $2.38.

Mr. Koffsky uses prices reported by retailers or families. The lack of national averages led to the use of prices reported by families even for items for which retail prices have been collected. The probable noncomparability of quality of clothing items priced by the BLS and the BAE was a basic reason why Mr. Koffsky did not use retail prices. Minor differences, suggested by the specifications for pricing, may exist for foods too.

FOOD SPECIFICATIONS

	BAE	BLS
Flour, white	24 lb. sack, best selling brand	5 lb. sack, or 10 pounds if 5 lb. sack is not available, a brand is selected from among the best sellers at a specific time, then priced until a change in brand is necessary.
Sugar, granulated	10 lb. bag, best selling brand	5 lb. white granulated cane or beet sugar.
Rice	Per package	Rice, polished, fancy whole gr. 16 oz. pkg. (if unavailable, the next smaller size). Brown rice excluded.
Apples, fresh	Per lb.	Largest selling variety of all-purpose apple; mature but not over ripe, U. S. No. 1, medium size, 1 lb.
Bacon	Sliced, per lb.	Sliced and packaged bacon, rind off, standard Grade A package, cellophane or similar material 1 lb. Sliced or unsliced slab bacon excluded.

If family data are used, whose prices are to be compared? The decision is especially important when prices vary markedly with income. This matter is examined in some detail in the discussion of clothing, and possible criteria are suggested (see Sec. II B).

Family size and type have a bearing on prices paid. If the cost of living for a certain type of family in farm and urban com-

[1] See F. B. Morrison, *Feeds and Feeding* (Morrison Publishing Co., Ithaca, 1944), p. 873.

munities is being considered, it is best to have prices paid by that type of family. The difference in prices paid by different types of family is more important for some items than for others. The grouping of single consumers and families in getting averages for the clothing category in the 1941 data confuses the farm-urban comparison. Single consumers, whose clothing standard at a given income differs from that of families of two or more, are quite important in the lowest two urban income groups and not at all important among farm families. Clothing prices in the Consumer Purchases Study do not suffer from this defect since single consumers were not covered.

Some of the differences Mr. Koffsky found between the prices farm and urban families paid are due to the weight of the regions at various income levels. For the farm group, at low income levels, the percentage of southern families is relatively high and has a significant bearing on the relative prices paid for overcoats and underwear, for example. As far as families in the South have a heavier weight in a farm than in an urban index a part at least of price differences such as these may be appropriate in a cost of living index even if not in a price index as such. However, farm families in southern states constituted 46 percent of all those reporting expenditures for 1941, and 65 percent of those with net money incomes of $250–500—the group of farm families whose clothing prices were used in the comparison.

3 *Choosing the item weights*

Many questions arise concerning suitable weights for items: for example, the relation of item weights to those of the main categories of the budget, to the income level of families, to the base period of the weights must be considered.

For the most part Mr. Koffsky based his item weights on the consumption pattern of median income families—$750–999 for farm and $1,500–1,999 for urban families. Having determined a measure of relative purchasing power for the separate and combined budget categories with these weights he compared price levels "for a standard of living on farms approximately equal to the city standard of living" (see his Table 9). For farm families

he used budget weights for major categories of the budgets of families with net money incomes of $1,500–1,999. By this change in the income base of the weights for farm families the difference between the relative costs of farm and of urban families was narrowed. The reason for shifting the base is not clear. If costs are to be compared at the point at which consumption is approximately equivalent, is it sufficient to select only the budget weights for the main categories of consumption at the point where the value of consumption represents about the same purchasing power? The internal weights of each budget category may have an important bearing on relative costs. What measures of relative cost would be obtained if relative cost were derived with weights based on the consumption of families with equivalent purchasing power? There seems to be no logic for using item weights at one income level and category weights at another. The importance of the income base of weights can be settled only when more is known about its effect on measures of relative cost.

The period is another factor to be considered in determining weights. Except for food, Mr. Koffsky based his weights on 1941 patterns; for food, on those of the middle 'thirties. Data on food consumption are available for the spring of 1942. Both sets of weights have shortcomings. Which has fewer? For the years just preceding 1941 the national consumption of dairy products, eggs, meat, fats and oils, nuts, citrus fruits, tomatoes, and green and leafy vegetables rose considerably, whereas the consumption of potatoes and grain products declined. The probable effect of this shift on relative cost has not been explored.

Changes in the consumption pattern are likely to affect relative cost only if they affect the relative importance of items that differ markedly in cost to farm and urban families. The weight of farm-furnished food as of 1935–36 is likely to be too high for 1941. Census data indicate a pronounced long time downward trend in its importance. The depression of the middle 'thirties probably brought a temporary reversal but the *1940 Census of Agriculture* indicates that the decline continued.

Another question concerning item weights is whether the items selected should be weighted by expenditures for them or by those

for groups of items. Mr. Koffsky does not discuss this point. The importance of such weighting depends upon how well the weights of the priced items represent the price patterns in the entire budget category. The best type of weighting can be determined only by systematic comparisons (see Sec. II A and B).

In selecting weights for the main categories of the budget, Mr. Koffsky disregards differences in family size and a part of the value of living received without direct expenditure. Difference in family size is especially important in that it affects the weight for food, the category differing most widely in relative cost (see Sec. II A).

Among the items received without direct expenditure, Mr. Koffsky included in his budget weights the value of housing of urban families and the value of food and housing of farm families. For neither group were clothing, housefurnishings, equipment, or fuel included. The effect of these omissions is not important except for fuel (see Sec. II D 2). There is, however, no reason for omitting them. Apart from fuel they are in considerable degree gifts that might be looked upon as an exchange of commodities among families, and expenditures for gifts outside the family are not counted in the cost of family living.

The most important feature of the budget weights from the standpoint of their effect on a measure of relative costs is the division between farm-furnished and purchased goods. In basing his weights for the main budget categories on the $750–999 instead of the $1,500–1,999 income group, Mr. Koffsky ignored this division. Yet farm-furnished food, as reported in Department of Agriculture Miscellaneous Publication 520, is 56 percent of the total purchased and farm-furnished food for families with incomes of $750–999, and 53 percent for those with incomes of $1,500–1,999.

II Selected Budget Categories

A food

The marked difference in the relative costs of the farm and urban food budgets reported by Mr. Koffsky has already been noted as well as some general aspects of prices and weights used. Two factors bearing upon the relative costs of food are presented here in

some detail : (1) retail prices versus prices reported by families and (2) the selection of items and weights for purchased foods.

1 *Relative costs of food based on family and retail prices*

The relative cost of 15 foods weighted by the quantities purchased by median income families in the spring of 1942, based on prices reported by these families,[2] was compared with that based on the retail prices reported by the BLS and BAE. Using retail prices the foods were first valued by BLS prices for April and May, and averaged with weights of 48 and 52 respectively in accordance with the distribution of the family schedules collected in these two months. Then the foods were valued by average retail prices for March and June as reported by both the BLS and BAE. March and June prices had to be used because BAE prices are reported only quarterly.

The March-June prices of BLS give a slightly lower value than the April-May prices. The March-June prices of BAE may also understate the difference that existed at the time of the family survey, although retail food prices reported by BAE during the first six months of 1942 rose more sharply than did those of large-city families.

	Dollar value of food		Prices paid by families: 100	
	Farm	Urban	Farm	Urban
Prices paid by families	$1.789	$2.340	100.0	100.0
Retail prices, April & May		2.507		107.1
Retail prices, March & June	1.870	2.491	104.5	106.5

Retail prices of the selected items of food bought by farm families were about 5 percent higher than prices reported in the family survey. The omission of chain store prices may be a factor and some of the difference may be due to differences in the quality and size of the package for which prices are reported by families

[2] The prices, based on data in Miscellaneous Publication 550, are for the purchased food consumed rather than for the food purchased during the week of the survey. They are for the purchased foods used by Mr. Koffsky except coffee and tea which were excluded because no prices for them could be derived from the family expenditure data.

and retailers. Since retail prices reported by the BAE are higher than those reported by farm families, the measure of relative cost based on retail prices will be lower than the one based on family prices, unless the BLS retail prices exceed the prices reported by families by at least as big a degree.

The BLS retail prices in large cities were 7 percent higher than those reported by families in all urban communities. The differences in the communities where the two sets of prices were collected are very important. To test the relative difference between these prices for urban families differences in the size of community and perhaps in regional weights also would have to be investigated. Published data are suggestive, although inadequate for a definitive answer. It is generally accepted that the larger the city the higher the cost of food.

The difference in the relative cost of foods to farm and urban families according to the prices used is given in the following tabulation. The weights are based on family data for spring 1942 at the median income.

	Urban prices as % of farm prices	
	Farm weights	Urban weights
Prices paid by families, spring 1942	108.2	105.5
Retail prices in large cities & for farm families, March & June, 1942	108.1	106.6
Retail prices in large cities & prices paid by farm families, spring 1942	113.9	112.9

Relative cost based on family prices for all urban and all farm families is about the same as that based on the retail prices of farm and large city families. The possibility of an upward bias in each has already been noted: for the farm group due to the omission of chain store prices and for the urban group due to the use of prices in large cities only. The third comparison suggests the difference that may exist in representative prices of purchased foods between farm and large city families.

2 *The items used and their weights*

The family expenditure data were investigated further to study the effects of (a) the base year selected on the proportion of home-

produced food, (b) family size on the weight of food, (c) income levels on the prices and item weights selected, and (d) items included, on the relative cost measures.

When one has two quite different measures of relative cost of living such as Mr. Koffsky found for food the question naturally arises which is more suitable. For food a measure using urban weights may be more suitable than that based on farm weights. For several decades farm consumption has tended to become like urban consumption in that more and more is purchased rather than home produced. Accordingly, farm budget weights of a given year tend to become less suitable for measuring the relative costs of food. The war did bring certain reversals in the earlier trend; for example, some shift back to home-produced meat. But with the abolition of rationing the earlier trend is again apparent.

Mr. Koffsky, in the estimate presented in his Table 9, based weights for the main budget categories on the consumption pattern of farm families that averaged 4.30 persons; of urban families that averaged 3.18 persons. The value of food as a percentage of the total value of living in the $1,500–1,999 bracket varies with size of family and differs, for the same family size, between farm and urban families. The lower weight of food for farm than for urban families seems reasonable since food is a necessity and costs the farm family less.

Number in Family	Farm[a]	Urban
2	25	30
3	30	33
4	33	34
5	36	40[b]
6 or more	38	

[a] Unpublished data smoothed. The value of home-produced food is assumed to be one-half of the value on a purchase basis.
[b] Data for urban families are combined for families of 5 or more: BLS Bulletin 822.

The income base of the weights of food items affects the measure of relative cost. Urban prices of the 15 selected foods as a percentage of farm prices—all prices and weights are those of median income families—average 108 using farm weights. If these prices are weighed by farm consumption at the income level

$1,500–1,999, they average 105. If the farm prices as well as the weights at the income level $1,500–1,999 are used, urban prices as a percentage of farm prices are 107.

The prices of a wide assortment of foods purchased during the week of the survey in spring 1942 were analyzed.[3] The prices and weights were those of farm families with money incomes of $500–999 and of urban families with money incomes of $1,500–1,999. These income groups include the median incomes and are those used by Mr. Koffsky.[4]

The 129 food items for which it was possible to get retail prices constituted 87.6 percent of all food purchased by urban families and 90.7 percent of that purchased by farm families. For farm families the major omissions were food accessories, including coffee and tea, which constituted 9 per cent of total food expenditures. For urban families important omissions occurred in fruits, vegetables, and meats. For many of these no farm purchase price was available because farm families bought none.

The relative cost of the 129 foods was determined first with the expenditures for the items as weights. Then the foods were put into 14 groups (see App. Table 1) and the relative cost of all food was measured with total expenditures for the 14 groups as weights. Weighting by expenditures for groups rather than for items affected the measure of relative cost only when urban weights were used because urban prices tended to be relatively high for fruits, vegetables, and meat.

Another comparison was made, dropping 29 food categories whose description seemed most likely to admit a difference in kind and quality between farm and urban families; e.g., the miscellaneous group; 'all other' categories; and a few other items such as nuts 'shelled' and 'in shell'; seafood, canned and fresh; pickles and relishes; and cake and candy. Expenditures for these 29 foods constituted 9.8 percent of the expenditures of farm and 12.3 percent of those of urban families for the 129 items. In determining

[3] Unpublished data on purchased food permitted the inclusion of more foods in the comparison. The published data were for purchased food consumed during the week of the survey.

[4] It might be advisable to explore the effect of comparing other income groups.

the relative cost of all foods, using the prices of the remaining 100 fairly homogeneous food items, the expenditure weights for the 14 groups were used. This change in the items had only a minor effect on relative costs when farm weights were used.

Still another comparison was made including the accessory group and using as an imputed price the relative price for canned fruits and vegetables—foods whose marketing process seemed most similar to that for coffee, tea, and other accessories. The addition of the accessory group was important for farm families because it constituted 9 percent of total purchased food. Finally, the prices of 15 of the 17 food items (coffee and tea could not be included) used by Mr. Koffsky were compared, on the basis of two sets of weights: those used by Mr. Koffsky and the expenditures of families in spring 1942 (Table 1).

TABLE 1

Urban Prices as Percentages of Farm Prices for Purchased Foods as Reported by Families, Spring 1942, with Selected Items and Weights

	Based on	
	Farm weights	Urban weights
	%	%
1 129 purchased food items weighted by expenditures for them	111.4	107.4
2 Same as line 1 except that foods are grouped and weighted by total expenditures for the groups	111.4	107.7
3 Same as line 2 except for the omission of 29 food items deemed least homogeneous	110.7	107.9
4 Same as line 3 except that accessories are included at the relative price of canned goods	109.7	107.6
5 Mr. Koffsky's items & weights (except tea & coffee)	105.2	102.9
6 Same as line 5 except that the weights are based on expenditures reported in spring 1942	108.2	105.5

Obviously if measures based on a few items are to be representative, the items and weights must be carefully selected. The items and weights chosen by Mr. Koffsky yield a smaller difference in cost than do the larger number of items and weights based on the expenditures either for the items included or for the groups as reported by median income families in spring 1942.

The effect of the range of items priced was further checked by means of prices reported for the Consumer Purchases Study by families in New York and Chicago and in small cities in the Northwest and East Central regions for May through August. The cost in New York and Chicago relative to that in small cities, weighted by small-city consumption, was 104 for 15 foods and 107 for 127.

B CLOTHING

Clothing price data have been explored to determine the effect of (1) the family members included, (2) the income level on prices and weights, (3) place of residence within a region, and (4) differences between the North and West and the Southeast.

1 *The family members included*

Mr. Koffsky's clothing list includes 14 items of men's and 10 items of women's clothing. At the income levels he uses, urban prices of clothing for boys and girls are below those for men and women as percentages of farm prices. The inclusion of children's clothing lowered each measure of relative cost.

	Urban prices as % of farm prices	
	Farm weights	Urban weights
Men and boys, 16 and over[b]	124.8	132.8
Boys, 2 to 15[c]	106.4	105.3
Women and girls, 16 and over[b]	133.6	132.3
Girls, 2 to 15[d]	124.5	116.4
All[a]	126.5	129.9

[a] Total clothing expenditure per person by the family members listed are: farm families $31.69, $7.46, $31.36, and $7.55 respectively; urban families $28.10, $3.86, $34.27, $3.17. Infant clothing, which is unimportant, is excluded.
[b] Items and price relatives are those used by Mr. Koffsky. The suitability of the items used could be checked in some degree.
[c] The 22 items were 77 percent of the farm and 73 percent of the urban expenditures for clothing.
[d] The 41 items were more than 90 percent of total expenditures for clothing.

2 *The income level*

Mr. Koffsky compared the prices paid by farm families with net money incomes of $250–500 and urban families with net money incomes of $500–999. Using farm weights urban prices were 129 percent of farm prices. Those acquainted with the merchandising of clothing in various communities are likely to be astonished at this difference. Farm families buy most of their clothing in urban

communities, although in small towns. Mr. Koffsky recognized the possibility of differences in quality but justified them on the grounds that he was measuring differences in minimum prices, since he selected the lowest income yielding significant prices. Is this a suitable criterion for selecting prices for comparing costs of living? If consumption opportunities in farm and urban communities were more nearly equal, differences in the lowest significant prices for clothing would probably not be as wide as those found to exist in 1941.

It is generally assumed that as families get 'better' clothing, they buy more of superior quality. Quantity and quality are directly related to income and complicate comparisons among groups if consumption patterns differ with respect to their relative importance. That availability of clothing and social pressure lead urban families to buy more clothing of better quality is another common assumption. If true and if urban families both pay and buy more, as indicated by deflated expenditures, some of the differences in price must be due to differences in quality. However, urban families may buy higher quality but the same quantity as or less than farm families.

Though no clearcut interpretation is possible, it seems worth while to compare expenditures of farm and of urban families adjusted for price differences. If at the income levels selected, the adjusted expenditures show that urban families buy more, the measure of the relative cost of clothing derived from the prices they pay is assumed to be due in part to differences in quality and to overstate the difference in the prices of goods identical or very similar in quality.

Adjusted values, based on the measures of relative costs in the above tabulation, suggest that men and women in cities at the income points used by Mr. Koffsky were getting 10–20 percent more clothing than men and women on farms. The quantity of clothing is much the same for farm and urban boys but is less for urban than for farm girls. However, urban families are smaller and probably the boys and girls are younger than in farm families. This fact may account for the smaller quantity of children's clothing indicated by the adjusted values.

	Expenditures per person		Adjusted expenditures for urban families, using indexes with	
	Farm family income $250–499	Urban family income $500–999	Farm weights	Urban weights
Men & boys, 16 & over	$24.38	$36.98	$29.63	$27.85
Boys, 2–15	14.07	14.86	13.97	14.11
Women & girls, 16 & over	23.00	34.27	25.65	25.90
Girls, 2–15	13.72	12.18	9.78	10.46

In deciding which income groups are most suitable for price comparison, the test of similar 'quantity' is one criterion. It may however be misleading. The 1941 price data are relatively unsuited to an exploration of farm-urban price differences because of the differences between the farm and urban samples in the relative importance of the regions and of single consumers and family types at various income levels, and because of the failure of the sample at various income levels to have suitable regional weights.

3 *Place of residence within a region*

Since clothing differs markedly by both region and type of community, it is well to examine these two factors separately. The exploration reported below is for the clothing of the husband in white families only. Data are available, however, for making similar comparisons for other family members. Since in this comparison farm families are 13 to 19 percent larger than nonfarm families and since nonmoney income that cannot be spent for clothing is relatively important for farm families, the prices and weights were taken at a higher income level for farm than for nonfarm families: $1,500–1,999 for farm and $1,000–1,499 for nonfarm families.

The data are not entirely devoid of regional differences likely to affect clothing prices, such as climate and distance from sources of supply. The regional pattern of clothing prices seems to be about as follows: low in the East, moving to a peak in the Plains and Mountains, and dropping slightly on the West Coast. For example, the heavy weight of the sample for the group of small cities in the North and West might be expected to make the clothing prices reported high in comparison with those for any other group.

Type of community	PERCENTAGE OF FAMILIES IN			
	New England	Middle Atlantic & North Central	Plains & Mountains	Pacific
Farms, North & West	5.4	60.0	8.7	25.9
Villages, North & West	12.1	51.3	16.2	20.4
Small cities, North Central & West		55.9	21.0	23.1
Small cities, New England & East Central	45.5	54.5		
Large & middle-size cities	33.9	66.1		
New York City & Chicago		100.0		

Department of Labor *Bulletin 648* and Department of Agriculture *Miscellaneous Publications 422* and *428*.

In the comparison among families in these communities, 51 clothing items were put into 5 categories because of possible effect of occupation and climate and differences in quality due to style. The groups and items included in them are:

Non-wool underwear and related garments (stockings, shirts (non-work), and pajamas and nightshirts) might be affected by differences in occupation, extent of central heating, and custom, but not by style.

Wool, both part and all, underwear and related garments (5 items) might show a differential in cost because farm families buy somewhat heavier woolen underwear than urban families.

Rubber footwear (3 items) too might show a differential in cost because urban families on the average buy a lighter weight than farm families.

Work clothing (overalls, coveralls, cotton work shirts, work shoes, and work gloves) is another group in which occupational differences are likely to be important and such garments are relatively standardized.

All other clothing was heavily weighted by items of outer clothing likely to differ markedly in quality because of the social significance of garb.

The data were examined for some indication of relative quantity. Quantity indexes based on adjusted expenditures for underwear and related garments and all other clothing show that except for the two groups of small cities, the adjusted expenditures of clothing for the husbands in village and urban families are

quite similar to those of farm husbands (see App. Table 2 for detail).

	Adjusted expenditures using indexes with	
	Farm weights	Urban weights
Farms, North and West	100	100
Villages, North and West	99	100
Small cities, North Central and West	108	108
Small cities, New England and East Central	83	86
Large and middle-size cities	100	102
New York City and Chicago	96	101

Quite a different picture is revealed by comparing types of garment. Expenditures for underwear in villages and cities are much higher than on farms. Is less stress laid on fine underwear among farm families? Do urban families buy less durable quality, which makes the replacement rate higher? Or do farm families make their own from flour and other sacks?[5]

Relative costs by type of garment reveal distinct differences. Which if any of these relative costs measures the relative prices of clothing to farm and nonfarm families for a specified quality? Pending further investigation, the relative cost of all clothing is probably best. According to it, clothing costs urban families 5–6 percent more than it does farm families.

	Nonfarm prices as % of farm prices (using farm weights)					
	Underwear and related garments		Rubber footwear	Work clothing	All other	All clothing
	Non-wool	Wool				
Farms, North & West	100	100	100	100	100	100
Villages, North & West	103	95	99	112	106	107
Small cities, North Central & West	99	89	85	114	109	108
Small cities, New England & East Central	92	81	87	109	107	104
Large & middle-size cities	93	78	82	108	107	103
New York City & Chicago	92	103*	69	111	113	107

* When city weights are used, the relative cost is 94.5.

[5] Expenditures for yard goods do not indicate that many garments for husbands are made at home.

4 *Differences in prices paid by white farm families in the North and South*

The relative clothing prices of farm and urban families reported by Mr. Koffsky are at times rationalized on the ground that a relatively high percentage of farm families live in the South. The effect of this distribution of population depends upon the extent to which prices for the same quality are different in the North and West and the Southeast.

Family expenditures on 48 clothing items for 'husbands' in 1935–36 were examined for white farm families in the North and West and in the Southeast. Because of differences in climate the clothing items were put into two categories: 'warm' and 'cold' weather.[6] It seemed possible that while the quality of cold weather clothing would differ greatly, that of warm weather clothing might be quite similar in the North and West and in the Southeast. If so, the price differences for warm weather clothing would be a suitable measure of the relative price difference for all clothing if items and quality were held constant.

Prices were first examined for families with incomes of $1,000–1,499 in each area. But since adjusted expenditures indicated that Southeast farm families had a relatively high clothing consumption,[7] prices at the $1,500–1,999 income level for families in the North and West were used.

PRICES OF CLOTHING IN THE NORTH AND WEST AS % OF PRICES IN THE SOUTHEAST

	North and West weights A	Southeast weights B
'Warm' weather	99.5	111.0
'Cold' weather	129.5	127.3
All	109.5	115.8

Actual expenditures on the clothing of husbands in the Southeast were adjusted by these measures of relative cost at the net total income level $1,000–1,499 for the Southeast and $1,500–1,999

[6] The latter included anything made of wool, whether outer or underwear, except felt hats; also overcoats, topcoats, and leather jackets. These items accounted for about one-third of the clothing expenditures.

[7] Lower expenditures for automobiles, electricity, and related items may be a factor.

for the North and West. The adjusted values suggest that at the income levels compared, the husbands had much the same consumption of clothing.

EXPENDITURES OF HUSBANDS FOR CLOTHING

Item	Southeast			North West Actual
	Actual	ADJUSTED BY INDEXES		
		A	B	
'Warm' weather	$21	$21	$23	$22
'Cold' weather	9	11	11	11
All	30	32	34	33

If the price difference in the warm weather clothing at these income levels is a measure of the price difference in clothing in general, the slightly higher weight of southern families in a national sample would not seem to make relative prices to farm families more than 1 percent lower than to urban families. Even if the difference for the entire clothing budget is accepted as a measure of difference in cost on the assumption that replacement rates are the same for the two regions, the heavier weight of the South in the population of farm in contrast to urban communities would not yield the differences in clothing costs reported by Mr. Koffsky.

C HOUSING

Housing heads the list of difficulties encountered because of inadequate price data and lack of comparable consumption. Mr. Koffsky states: "Housing as it is commonly available in the city is for all practical purposes nonexistent in farm areas." He might well have gone on to say that the equivalent of good housing in farm communities (of which many examples can be found) is for all practical purposes nonexistent in cities. Space for children to play, freedom from noise, abundance of fresh air are important features of good housing for which some urban families pay very high prices.

Mr. Johnson points out in his discussion that systematic comparison of costs of building materials and labor would probably reveal lower costs for farm than for urban families rather than the equal costs assumed by Mr. Koffsky. Some data are given below to indicate the difference.

Mr. Koffsky does not mention the cost of land. If the same housing is to be provided, not only should the plumbing and electricity be identical, but so also should the land area—an important element of housing. Even when one considers only the house lot, land cost is unimportant for 99 percent of farm families and important for 99 percent of urban. An allowance for land comparable to $15 for farm families would probably call for $500 for urban families.

Housing expenses entangled with the farm business, such as taxes and fire insurance, were also overlooked. The former would certainly be much higher for urban families and the latter probably somewhat higher for farm families.

Fairly comparable data on prices of building materials in farm and urban communities were obtained for only two items. For December 1944 the average price of common bricks per 1,000 to contractors in 53 cities, reported to BLS (unpublished data), was $17.80; the average price to farmers reported to the BAE, $22.60. A 2 x 4 board cost $54.99 and $53.30 per 1,000 feet, respectively. The lower price of lumber in the country is especially important since wood is the main material for farm building. In 1934 more than 90 percent of the farm dwellings covered in the housing survey were frame. Furthermore, an appreciable percentage of the lumber is probably local and purchased from sources the BAE does not reach. Such an omission, of little consequence in measuring trends in prices, may be important in measuring relative prices to farm and urban families.

Apart from lumber, the major cost of a house is labor. Indicators of its relative cost to farm and urban families in 1941 are union rates per hour in the building trades by size of city as of June 1, 1941. The average rate ranged from 84¢ to $1.667 in the North and West and from 76¢ to $1.36 in the South.

UNION WAGE RATES
(average of six building trades)

Population	North and West	South
1,000,000 and over	$1.667	
500,000–1,000,000	1.468	$1.360*
250,000– 500,000	1.439	1.278
100,000– 250,000	1.297	1.198
50,000– 100,000	1.234	1.208*
25,000– 50,000	1.190*	1.080*
10,000– 25,000	1.100*	1.000*
5,000– 10,000	1.010*	.920*
2,500– 5,000	.945*	.880*
Under 2,500	.840*	.760*

Bureau of Labor Statistics, Wage Analysis Branch. Each of the six trades was given the same weight.
* Estimated by linear extrapolation to logarithmic scale with the regression line for the South approximately parallel to that for the North and West.

Incomes of nonrelief wage-earning families, 1935–36, vary with size of community much as wage rates do.[8] Assuming that farmers hire workers only from small cities and rural communities and hire one man for every two that urban dwellers hire, it seems safe to conclude that labor costs in 1941 were at least 25 percent higher for urban families. Moreover, some of the work, especially excavation, is done by farm labor which is paid at a much lower rate than labor for similar work in the city.

D OTHER BUDGET CATEGORIES

1 *Furniture, equipment, and furnishings*

As with clothing, the selection of the income level at which to take prices is a major determinant of any measure of relative cost based on prices reported by families. Mr. Koffsky says he selected prices at the "lowest significant income level" except for a few items. As for many items farm price data are not available by income level, what does a comparison of prices paid by all farm families and by urban families at the lowest significant income level mean? Examination of the prices item by item suggests that for many articles of furniture, equipment, furnishings, and

[8] National Resources Committee, *Consumer Incomes in the United States* (1938), p. 27. The mean income in metropolises is $1,626; in large cities, $1,414; in middle-size cities, $1,263; in small cities, $1,261; in rural communities, $1,004.

household textiles, prices reported by families are unsatisfactory for measuring farm-urban price differences, and that prices reported by retailers for articles of given specifications would be infinitely superior.

2 *Fuel, light, and refrigeration*

Fuel is one of the items for which the home-produced portion is omitted in the over-all budget weights. Fuel, light, and refrigeration, omitting farm-furnished fuel, are 5 percent of the total value of living of farm families with incomes of $1,500–1,999, and 7 percent, if 'non-money income from household operation' is included.

Mr. Koffsky reports the average price of fuel bought by farm families to be higher than the urban. But the fuel, light, and refrigeration items he selected include only 58 percent of the value of fuel, light, and refrigeration of urban families with incomes of $1,500–1,999, and 38 percent of that of farm families with incomes of $750–999. For the latter, fuel received without direct expenditure as valued by the respondent constituted 39 percent of the total value of fuel, light, and refrigeration. Kerosene also was omitted, though for farm families it was more important than anthracite coal, which was included. Neither gas nor wood was included. For them price differences are large, wood being important to farm families and gas to urban. These differences seem due largely to their relative prices, and their inclusion in the fuel budget changes the measure of relative cost considerably.

To explore the effect of including more items, especially those for which price differences are wide, some guesses have been made concerning probable prices (Table 2). Price relatives for kerosene and gasoline are those for gasoline as reported by farm and urban families for their automobiles. As far as fuel oil is available (7 percent of the farm families reported expenditures for it in 1941) it seemed probable that its relative price would be much the same as that of gasoline. The relative cost of gas in terms of BTU's was based on the price of bottled gas sold by a company in the Middle West and the retail price of gas reported by the BLS in 1941. Bottled gas per 1,000 BTU's cost .355 cents; gas to city

families cost .079 cents.[9] Wood purchased by farm families was assumed to cost two-thirds of what urban families paid. Urban prices as a percentage of farm prices, using farm and urban weights, are 134 and 55.

Such a range would seem to indicate that this method of comparing prices is entirely unsuited for measuring the relative cost of the same level of welfare. However, fuel, light, and refrigeration constitute a small part of the total budget.

TABLE 2

Fuel, Light, and Refrigeration Prices, Farm and City, 1941

	City price as relative of price to farm family	Weights based on farm family expenditures[a]	Price to farm family as relative of city price	Weights based on city family expenditures[a]
		%		%
Purchased				
Bituminous coal[b]	100	13.3	100	15.0
Anthracite coal[b]	82	6.7	122	14.1
Wood	150	5.4	67	2.9
Kerosene & gasoline[c]	102	10.9	98	4.9
Fuel oil	102	1.3	98	11.4
Gas	22	.6	449	19.3
Electricity[b]	73	22.7	138	32.4
Farm-furnished	200	39.1	50	0.0
Total	134	100.0	181	100.0

[a] The items listed constituted 94 percent of the expenditures of urban and 89 percent of those of farm families.
[b] The price relatives reported by Mr. Koffsky.
[c] The urban figures from BLS unpublished data.

3 *Medical and allied services and goods*

A preliminary investigation has been made of prices of medical and allied services and goods. Here as with clothing and many other items, relative costs are largely a function of the income groups selected for comparison. The weights and prices in Table 3 are for the income group $1,750–1,999 for both farm and urban families. Even at the same income level one has, however, no assurance that the quality of service is even approximately the same.

Data are available for only the first three items listed. For farm families they are the average for four analysis units in the Middle

[9] It was assumed that one-third of the families burned enough bottled gas to get the slightly cheaper rate; and that 5 percent of the urban gas was at the heating rate.

Atlantic and North Central regions, weighted by the number of families reporting. Urban prices are the unweighted averages of the prices reported by families in villages in the Middle Atlantic and North Central regions, in small cities in the North Central region, and in Chicago.

TABLE 3

Prices of Medical Services and Allied Items, Farms and Selected Cities, Families with Incomes of $1,750–1,999, Middle Atlantic and North Central Regions, 1935–1936

	City price as relative of price to farm family	Weights based on farm family expenditures	Price to farm family as relative of city price	Weights based on city family expenditures
		%		%
Physician, office visit	157	18.3	64	16.6
Physician, home visit	93	14.5	108	10.9
Hospital per day	114	16.0	88	12.5
Total	124	48.8	83	40.0
Surgeon	130	6.1	77	6.0
Nursing, private	114	4.1	88	2.1
Dentist, oculist, & examinations	127	18.3	79	22.3
Medicines, supplies, insurance, eye glasses, etc.	100	22.7	100	29.6
Total	119	100.0	87	100.0

The other relative prices are guesses. Because surgeons serving farm families practice in relatively large cities it was assumed that the difference in the rate paid by farm and nonfarm families is likely to be less than in the office rate of general practitioners. It was assumed that the difference in the fees dentists and oculists charge farm and urban families is about half as large as in the office rates of physicians. The 'price relative' for hospitals is assumed to apply to nurses but the weight for the latter is so small that further refinement was not attempted. Medical supplies, insurance, and other items were assumed to cost each group the same, largely because of the prevailing retail price structure of these items.

According to this calculation the cost of medical services and allied items to farm families would be 19 percent higher if purchased at city prices. The items for urban families cost 15 percent more than they would have at prices paid by farm families. This

over-all measure of price difference is 5 points higher than that reported by Mr. Koffsky. If the comparison is confined to the items Mr. Koffsky used, the price difference is 5 points more. For this budget category also prices paid for goods of a given specification are needed in order to have a valid measure of differences in price or the costs of equivalent consumption.

III Better Measures of the Cost of Living

Two things stand in the way of satisfactory measures of the relative costs of living of farm and urban families: lack of equivalent consumption budgets and inadequate price data.

An effort should be made to define and describe equivalent consumption. The methodology of the Bureau of Labor Statistics in developing a budget for urban workers should give considerable guidance. To do this more up-to-date information, with a larger sample than was collected in 1941, is needed on the consumption patterns of farm families.

But meanwhile some improvement will be possible as more adequate price data become available. For the segments of the budget where pricing the same budget in two markets, e.g., clothing, personal care, and medical care, has most validity, better price data are essential. For housing, prices for specific items in farm housing are needed and a method must be developed for getting annual costs even if the concept of equivalent housing calls for the same space and facilities for both groups.

Two major problems faced in striving for better price data are control of specifications and suitable coverage of items and places of purchase. What are the relative merits of prices reported by retailers and by families? If the relative divergence between them is the same for two groups of families to be compared it is immaterial which set is used, though one may be more suitable for a measure of the dollar cost of a budget. Differences in these two types of price have been explored to only a limited degree. Some difference is to be expected since for retailers' prices the universe sampled does not include all places selling to families, all days of the week and all 'qualities'. Prices paid for food purchased by farm families are especially difficult to obtain since some food is bought from nearby farms.

Family surveys could be designed and tabulated so that the items averaged in a single category would be more homogeneous than those in the *Survey of Spending and Saving in Wartime* for 1941. Nevertheless, between farm and urban families at any income levels selected for comparison, important differences in quality, size of package, and other factors are likely to continue to interfere with the measurement of price differences as such but not necessarily with the measurement of relative costs of living.

Because retailers are more likely than housewives to know quality, prices obtained from them for goods of given specifications are likely to be more accurate. However, no matter how carefully specifications are drawn up and followed, some items have intrinsic differences in quality that are difficult to put one's finger on. Style, for example, does not lend itself readily to specification. Subtle differences may vitiate the comparison even when an attempt is made to ascertain from families or retailers the price of a specified quality. But these differences are probably unimportant when measuring relative costs of living.

APPENDIX TABLE 1

Urban Prices as Percentages of Farm Prices and Expenditures for Foods, Farm and Urban Median Income Families, Spring 1942

	Relative Prices				Expenditures	
	129 items		100 items			
	Farm weights	Urban weights	Farm weights	Urban weights	Farm	Urban
Milk group	109.3	105.3	109.3	104.5	$.261	$1.586
Potatoes	104.3	104.5	104.3	104.5	.195	.254
Dry vegetables & nuts	119.2	124.8	117.1	119.2	.186	.102
Fresh vegetables & fruits	113.1	111.0	113.1	111.0	.479	1.369
Canned vegetables & fruits	99.7	101.2	100.4	101.2	.226	.597
Dried fruits	110.8	106.5	110.8	106.5	.038	.045
Eggs	125.0	125.0	125.0	125.0	.010	.760
Meat, poultry & fish	120.2	112.4	114.3	109.5	.563	2.502
Bread, bakery products	101.8	95.4	105.7	103.5	.381	.971
Flours, cereals	114.4	97.0	115.1	97.0	.687	.296
Fats	106.8	106.6	106.9	108.3	.614	1.157
Sugars & sweets	113.6	104.2	111.8	100.8	.465	.316
Miscellaneous	125.9	106.6			.053	.235
Accessories					.420	.410
Total	111.4	107.7	110.7	107.9	4.578	10.600

APPENDIX TABLE 2

Village and Urban Prices as Percentages of Farm Prices and Expenditures for Husband's Clothing by Farm Families with Incomes of $1,500–1,999 and by Nonfarm Families with Incomes of $1,000–1,499, Selected Communities, 1935–1936

	Relative Prices		Expenditures	
	Farm weights	Nonfarm weights	Farm	Nonfarm
FARM AND VILLAGE FAMILIES IN NORTH AND WEST				
Non-wool underwear & related garments	102.5	101.8	$4.42	$6.19
Wool underwear & related garments	94.8	92.2	1.19	1.01
Rubber footwear	99.2	97.0	1.67	.72
Work clothing	111.7	111.7	10.99	7.08
All other clothing	106.3	104.9	15.67	20.74
Total clothing	106.8	105.0	33.94	35.74
FARM AND SMALL CITY FAMILIES IN NORTH AND WEST				
Non-wool underwear & related garments	98.9	99.6	4.42	6.64
Wool underwear & related garments	89.1	89.3	1.19	.86
Rubber footwear	85.4	86.4	1.67	.56
Work clothing	113.8	113.5	10.99	7.03
All other clothing	108.8	108.1	15.67	24.09
Total clothing	107.8	106.6	33.94	39.18
FARM FAMILIES IN NORTH AND WEST AND SMALL CITY FAMILIES IN NORTH CENTRAL				
Non-wool underwear & related garments	92.4	92.2	4.42	5.71
Wool underwear & related garments	81.3	79.5	1.19	.71
Rubber footwear	86.6	85.1	1.67	.74
Work clothing	108.8	107.9	10.99	5.43
All other clothing	107.4	104.6	15.67	16.80
Total clothing	104.0	101.2	33.94	29.39
FARM FAMILIES IN NORTH AND WEST AND FAMILIES IN LARGE AND MIDDLE-SIZE CITIES				
Non-wool underwear & related garments	93.3	92.2	4.42	6.77
Wool underwear & related garments	77.7	72.4	1.19	.63
Rubber footwear	81.9	79.9	1.67	.53
Work clothing	108.4	105.6	10.99	4.21
All other clothing	106.9	105.0	13.67	22.80
Total clothing	103.4	101.1	33.94	34.94
FARM FAMILIES IN NORTH AND WEST AND FAMILIES IN NEW YORK AND CHICAGO				
Non-wool underwear & related garments	92.3	88.0	4.42	6.34
Wool underwear & related garments	102.8	94.5	1.19	1.05
Rubber footwear	68.6	72.2	1.67	.30
Work clothing	110.9	108.2	10.99	3.51
All other clothing	113.0	106.8	15.67	23.74
Total clothing	107.1	102.1	33.94	34.94

D. GALE JOHNSON

My discussion of the Koffsky paper can conveniently be divided into two parts: (a) the farm and nonfarm income comparisons that have significant implications; (b) the methods of comparing incomes, namely, the index number problem. It is somewhat surprising that students have not developed a systematic set of statements with respect to the types of interesting and relevant income comparisons and the types of income data required for such comparisons. Most of their attention has been devoted to the index number problem itself, in all its theoretical niceties. Yet income data are sometimes used in comparisons that have little or no relevance to any analytical concept.

I find myself quite critical of the income concepts used and the comparisons made in the paper. Though I agree wholeheartedly with the need for a new definition of parity, I cannot accept the loose formulation Koffsky advocates. He defines parity, which involves an income comparison, as "the income necessary to yield to the farmer a purchasing power approximately equivalent to that of the urban worker". Presumably 'purchasing power' implies level of well-being, satisfaction, or scale of living. Even when the broad definition of parity is narrowed by restricting 'farmer' to 'farm operator' and 'urban worker' to 'factory worker', the concept is still unsatisfactory.

There are, it seems to me, four questions that might interest social scientists in determining what incomes are equivalent in terms of well-being in two occupations or locations:

1) Are families receiving their incomes from different occupations or living in different places equally well off (on the average)?
2) Do resources earn the same real rates of return in different occupations or different places?
3) Do individuals have information concerning the advantages and disadvantages of occupations and places?
4) What levels of income are required in different places to provide a socially acceptable minimum level of living?

It is the first of these that Koffsky has selected and defined as parity. This comparison is of considerable practical and political interest—it might be useful in determining rates of federal grants

to states, etc.—but has relatively little meaning in an analytical context. Since the incomes compared are a mixture of many elements—returns from labor, capital, land, managerial ability—the comparisons are not indicative of underlying sources of differences in level of well-being.

The second is the most important in research and in policy formulation. It is in terms of such a formulation that the allocative efficiency of the economy can be tested empirically.

To give empirical content to this parity formula or income comparison three important sets of data are required:[1]

1) The (marginal) rates of monetary return (including imputed values of output consumed on the farm) to resources in agriculture;
2) The (marginal) rates of monetary return to comparable resources in the rest of the economy; and
3) The relative purchasing power of incomes in different places.

Since the relative purchasing power of income from capital depends upon the location of the owner of the capital rather than of the capital itself, it is the relative purchasing power of labor income that must be determined in the present context. In other words, as I see it, the determination of parity turns wholly on evaluating the equivalence—in terms of well-being—of labor returns. The concept defined by Koffsky would be influenced by the capital accumulations of farm families and existing rates of returns on capital, as well as by current labor earnings.[2] I have estimated that about 30 percent of net farm operator income is attributable to capital. An income parity as defined by Koffsky would not indicate whether income earning opportunities in agriculture were equivalent to those in the rest of the economy (for resources of comparable training, basic skill, capacities, etc.). Equivalence of well-being, as indicated by such a comparison,

[1] Theoretically other factors, such as uncertainty and Adam Smith's net advantages or disadvantages of an occupation, should be included. Practically such factors probably have to be excluded.

[2] Labor earnings should include not only those derived from farming but also from nonfarm jobs available in the particular economic environment.

could be due to the inclusion of returns from capital, including land, in one case, and a failure to do so in the other.[3]

The significance of income comparisons of the type under discussion—in terms of returns to resources—is difficult to exaggerate; for from them it should be possible to reach the appropriate decisions with respect to the best allocation of resources.

Interestingly enough it is in this context that comparisons of returns to resources present the greatest difficulties. In a farm-firm, there is generally no clear-cut division of the product among the various factors or resources. As a consequence, imputations of a more or less unsatisfactory nature must be made. However, it seems preferable to make the imputations than to ignore the problem.[4]

The third reason for making income comparisons may seem insignificant. However, if economists or others settle the problem of the business cycle, interest may once again be focused upon the long run problem of resource allocation. If even a modicum of allocative efficiency is to be achieved, labor mobility must be of significant magnitude and guided by more than rumor and misinformation. A really adequate employment service should give information not only about job opportunities in another location but also about the approximate differences in cost of living in order to help the individual make the best choice. From the standpoint of the individual the appropriate income comparison involves the entire complex of returns from all resources owned. In this case capital returns must be included, since the environment in which the income will be spent will be different.

If society, in one way or another, ever arrives at an explicit definition of a socially acceptable minimum scale of living, the meaningful use of the concept will involve all the problems raised

[3] Imputed house rent on owner-occupied farms (as well as tenant-occupied) is included in farm income, while imputed rent on houses owned and occupied by factory workers is not. However, a correct comparison—for present purposes—involves purging both sets of income data of capital returns.

[4] Two other 'measurement' problems may be noted: (a) to determine the comparability of resources, particularly labor, and measure differences in capacities; (b) to determine—where the market imputes rates of returns—whether resources receive the value of their marginal contribution.

by place-to-place comparisons of money incomes. If a socially acceptable scale of living is ever set forth, it will be of considerable value to the economist. Of most significance will be the benchmark it will provide for spotting and measuring poverty.

The analytical concepts underlying the incomes to be compared should receive as much attention as the concepts involved in formulating the index to be used in comparing the incomes. We now turn to the index number problem presented in Koffsky's paper.

The nature of the comparison should be made clear at the outset. Had every item in the farm scale of living been bought in the city, the ratio of the cost of the budget at urban prices to its cost at farm prices would indicate the *maximum* percentage increase in expenditure necessary to make the farmer as well off under urban conditions as on the farm. No clue is provided for the percentage increases in expenditure actually required to give the same level of satisfaction. Koffsky correctly rejects the ideal index formula as a means of arriving at an average index, but I find it difficult to understand his reason. Koffsky's comment, that the spreads between Laspeyres' and Paasche's formula "are interpreted in the light of differences in the consumption patterns . . . rather than as prohibiting price comparisons", seems beside the point. The two index formulas can give valid upper and lower limits when consumption patterns are widely divergent, if the only difference in two situations is in prices. And if relative price changes are big enough, the spread may be very wide even though the levels of satisfaction are identical.

Since the indexes as determined obviously do not provide a clear-cut basis for answering any of the questions posed above, I suggest that two other indexes be constructed to supplement them. One index should include adjustments for differences in the mode of living associated with such factors as distance from work or shopping, climate, and minimum acceptable levels of quality. The third factor introduces the influence of social factors, but since we are all subject to them, their introduction is not amiss. Except for the items directly affected, the remainder of the weighting would be in terms of actual budget figures. This

index would probably be most helpful to an individual choosing a place to live. It might not be without some meaning in the other cases.

The second suggestion is that price comparisons be made in terms of a budget constructed of the more common elements in the existing patterns of consumption, presumably what the Bureau of Labor Statistics has done in its place-to-place comparisons. Though one would not want to rely solely on such an index, it might be a useful adjunct to the other two.

The adjustments made to determine price level differentials for 1945 seem open to serious question. The Bureau of Agricultural Economics and the Bureau of Labor Statistics cost of living indexes are constructed so differently as to render comparison between them invalid. Though part of the greater rise in the BAE index can be explained, much of it is due either to voluntary uptrading or to forced uptrading and quality deterioration not reflected in the BLS index.

My last comment concerns the treatment of housing. The assumption that housing costs are the same in urban and farm areas seems wholly unreasonable. Observation indicates a definite increase in the cost of housing of comparable quality as one progresses from smaller to larger urban areas, and there seems no reason why farm housing should cost more than that in small towns and cities. Of course, my feelings may reveal a last vestige of agricultural fundamentalism. A 40 year old farm house without running water or an inside toilet, but with adequate light and free from the filth of a congested city area, seems preferable (to me) to a house of similar age and size in an urban area having the above-mentioned facilities.

But my objections must rest on stronger grounds. And such grounds seem to exist. First, the land cost per dwelling unit—valued at current prices—is much higher in urban than rural areas. Second, tax rates are much higher. Of course, part of the difference may be reflected in differences in the public services received. Third, building costs tend to increase with the degree of urban concentration. The Illinois State Assessor has estimated that building costs in Chicago are 25 percent higher than in other urban

areas in the state. Moreover, much building and maintenance on farms is done by the farmer himself, at either direct or imputed costs much below those in urban areas.

The more important point seems to be that a reasonably satisfactory price comparison is possible in the case of housing. The procedure is relatively simple, though obviously unavailable to Koffsky at the moment. Several houses should be described by specifications, such as number of rooms or total cubic area, central heating, running water, private bath, toilets, age, and general type of construction. A housing survey should be conducted which would 'price' such houses in farm and nonfarm areas and obtain data to provide weights for determining the average difference in price.

In conclusion, I would like to offer the heretical suggestion that place-to-place price comparisons be made directly by questioning actual migrants.[5] If income data were available both before change of residence and currently, fairly significant results might be derived from the comments with respect to level of satisfaction. The actual mechanics of such a survey, if made within one to three years after a sample census collection of income data, do not seem too complicated.

E. W. GROVE

Aside from the basic index number problem, I think there are several weak links in Mr. Koffsky's chain of reasoning, notably the assumption of no price differential in housing as between farm and urban areas, the rather arbitrary adjustment for unpaid farm family labor, and the failure to consider income of farm operators from sources other than agriculture. The net effect, I suspect, has been some understatement of the position of farm operators as compared with urban wage earners.

Another weakness is the heavy weight assigned to farm-furnished foods, with their tremendous price differentials. It might have been preferable to have valued this item of farmers' income

[5] Though I have long believed that this suggestion was of value, I did not know until I saw Mr. Staehle's paper, that J. M. Keynes had made it some two decades ago.

at retail prices to start with, thereby eliminating it from the price-level comparison. Had this been done, the remaining price differential would have been relatively small—averaging less than 10 percent—and perhaps not very significant.

Despite these weaknesses, Mr. Koffsky's conclusions are of considerable interest, and probably generally valid. I am particularly interested in the implications of his methods and results with respect to income parity for agriculture as currently computed by the Bureau of Agricultural Economics. Mr. Koffsky notes that income parity is currently based on relative incomes, with no allowance for differences in price levels, and that the results may not represent parity in terms of actual purchasing power or real incomes. Income parity was originally defined in terms of purchasing power; but, largely because of an acute lack of the type of data Mr. Koffsky has assembled here, the current basis, relative incomes in current dollars, was substituted.

Obstacles to a comparison in terms of real incomes are serious but not as formidable as they were ten years ago. Would the results of the income-parity analysis be substantially different if determined in accordance with the original purchasing power definition, and if so, in what direction? Some tentative answers can be given on the basis of adjustments in the farm income data to achieve rough purchasing power comparability with the nonfarm data. The results agree more or less with Mr. Koffsky's conclusion that farm and nonfarm real incomes were approximately equal in 1945. They indicate also about the same discrepancy as Mr. Koffsky found for 1941. More generally, they suggest that the wide cyclical swings in per capita farm income relative to its parity level, the latter being determined by fluctuations in nonfarm per capita income, would be substantially reduced if the analysis were in terms of real incomes.

The Bureau of Agricultural Economics has estimated the net income per person on farms from agriculture and government payments to be $585 in 1945, or 45 percent of the corresponding nonfarm per capita average. If the income of persons on farms from nonfarm sources is allowed for, the percentage ratio is increased to 59; and if farm-produced food and fuel consumed in farm

households are included in farm incomes at retail instead of farm prices in order to approximate the purchasing power equivalent of these items in terms of nonfarm incomes, the ratio is further increased—to 65 percent. Mr. Koffsky assumed that differences in rental values of farm and nonfarm dwellings arose from differences in quality, and that there was no price differential in housing. If the opposite assumption is made, namely, that average differences in actual rental values reflect price and not quality differentials, the percentage ratio for 1945 is still further increased —to 70. Finally, if the cash part of per capita farm income is adjusted for the differences in prices paid as presented by Mr. Koffsky—differences averaging only about 5 percent for 1945 when farm-furnished food and housing are excluded—the ratio is increased 2 more points—to 72.

Even in 1945, therefore, actual real incomes per capita were lower for the farm population as a whole than for the nonfarm population. But two additional factors should be taken into account; the differences in the regional distribution of the farm and nonfarm populations and in the average size of the family in the two groups. The significance of the first factor, or the concentration of the farm population in areas where incomes in general are below average, may be assessed by reweighting state figures on per capita farm incomes in accordance with the state distribution of the nonfarm instead of the farm population. The per capita farm average for the United States as a whole in 1945 is thereby raised 15 percent. Since differences in regional weighting have already been allowed for in the adjustment of home consumption and rents, this additional adjustment is applicable only to the cash part of per capita farm incomes, and raises the farm-nonfarm ratio 8 more points—to 80 percent. And since the average farm family in 1945 was about one-fourth larger than the average nonfarm family, transformation of the ratio from a per capita to a family basis would obviously raise it to 100.

From these rough calculations it may be concluded that the average real incomes of farm and nonfarm families in the same general locality were about equal in 1945. When the data for earlier years are similarly adjusted, the results suggest that the

real incomes of farm families, even after allowance for differences in regional distribution, average about 25 percent below those of nonfarm families; and the cyclical variations around this norm are considerably narrower than the variations in the income-parity ratios currently computed. In part, this arises from the inclusion of the income of persons on farms from nonfarm sources, a somewhat more stable element than farm income itself; but the principal factor is the revaluation of home consumption, the relative spread between farm and retail prices of food having been much wider during depression years when cash farm incomes were low than in more prosperous times when they were relatively high.

The net effect is a considerable smoothing of the ratios between farm and nonfarm per capita incomes. In 1932, for example, although incomes in general were exceptionally low, the farm-nonfarm ratio was probably not more than 10 or 15 percent below normal in terms of average real incomes; in terms of current income-parity calculations, almost 40 percent. For 1945, on the other hand, the latter would indicate that income per person on farms was 62 percent above parity, whereas the excess would probably not be more than 30 or 35 percent if determined on the basis of comparative real incomes. The 'normal', moreover, does not represent 'equality'.

Reply

With respect to the construction of the index, both Miss Reid and Mr. Grove question the use of prices received by farmers instead of retail prices for farm furnished food. As indicated in my paper, it does not matter which valuation is assumed, as long as it is consistent with the valuation on which farm income is computed. The official Bureau of Agricultural Economics estimates of the value of farm furnished food are based on prices received by farmers. Since they provided the basis for the income comparison it was desirable that they should be the basis for the price index. The price comparison in this paper is based on the standard of living for a particular year and the standard of living

in each succeeding year was urged as the basis for each year's price comparison. The end result would be the same whether farm furnished foods were valued at retail prices or at prices received by farmers.

Miss Reid and Messrs. Johnson and Grove have all commented on the weakness of assuming no price differential between housing on the farm and in the city. With this I agree whole-heartedly, but price data on housing of the type necessary to fit in with the price comparisons of other groups are not available. Perhaps the approach Miss Reid has outlined is the most satisfactory. But pricing the cost of a standard house in both urban and farm areas is not the whole story, even if price data were available to do so. Perhaps the difference in the cost of building a standard house in the country and in the city in a certain year could be calculated. Data from the *1940 Census of Housing* were presented as evidence that the types of housing available to farmers as a whole were entirely different from those available to the typical city worker. Furthermore, considerably more than half of urban families rent their houses and a somewhat smaller percentage of farm families also rent. For most years, it is quite unlikely that the rents paid reflect the cost of building in a particular year. In addition, scarcity of housing, OPA ceilings, and the income producing potentials of farms would affect rents. A survey of the nature Mr. Johnson suggests would be helpful, but would not give the final answer to the question of differences in housing costs. More desirable would be an estimate of the price differential for the type of housing commonly available on farms and, conversely, the price differential for the type of housing commonly available in urban areas. As indicated by the *Census of Housing* data, these would be difficult computations. The over-all estimate of the price differential presented would not be changed significantly by the refinement suggested. For example, if housing is assumed to cost 25 percent more in urban areas than on farms, the composite index of the price differential is increased only 3 percent.

It is gratifying to note the resources Miss Reid has mobilized in examining price level differences between the farm and urban communities. It is also of some comfort that her calculations did

not lead to a conclusion that the measure of relative purchasing power would be much different from that reported in my paper.

Miss Reid has made a valuable contribution in reporting the results of using other methods and data (some unpublished and unavailable to the writer), and particularly, in opening up the discussion of geographical differences, most of which were bypassed in my paper.

The tabulation of prices paid by families for 129 purchased foods, presented by Miss Reid, is subject to some reservations. Miss Reid has commented on the importance of specifications for the items priced. It was largely for this reason that I used the retail prices of foods collected by the BAE and BLS for determining the differential for this commodity group. While the specifications of the two Bureaus are far from identical, the data are better than those in the food study drawn on by Miss Reid, for which specifications were almost completely lacking. Furthermore, the prices Miss Reid used are average prices paid by families in one week in the spring of 1942. In view of the seasonality in food prices and purchases, it seems hazardous to rely on such data for approximating the differential in 1941.

Miss Reid's calculations of the differential in clothing prices are of particular interest inasmuch as she arrives at a much lower figure (5 or 6 percent higher in the city than on the farm) than I (29 percent). This large discrepancy can be explained by the fact that she compared prices for considerably different income groups. It seems hardly justifiable, despite the reasons she advanced, to compare prices at income levels of $1,500–1,999 for farm families and $1,000–1,499 for nonfarm. It seems more reasonable to reverse the income groups, since all evidence points to at least a generally lower price level for farm than for nonfarm families. Inasmuch as the average price per item of clothing increases quite rapidly as income increases, it is not surprising that most of the difference in price levels disappears when the comparison is based on Miss Reid's choice of income levels.

My calculations represent the price differential between farm and urban communities in 1941 whereas Miss Reid's represent the difference between farm and nonfarm in 1935–36. Miss Reid's

inclusion of the rural-nonfarm together with the urban population operates also to reduce the spread in prices because the rural-nonfarm price level probably lies between the farm and the urban levels.

With respect to prices of furniture, equipment, and furnishings, Miss Reid reports: "for many items farm price data are not available by income level". Miss Reid is referred to *Rural Family Spending and Saving in Wartime*, Table 21, page 52, where data by income groups are shown.

For both clothing and house furnishings, Miss Reid suggests that it would have been preferable to use the prices collected by the BLS and the BAE for their respective indexes of retail prices to urban and farm families. I agree that these would be preferable and would permit a somewhat better comparison because of the specifications on which the data were obtained. However, there are no such price data on a national scale for urban families. When they are made available by the BLS, I shall be glad to reexamine my calculations for these groups of commodities.

Miss Reid's contribution is of great value in bringing out some of the regional and place of residence aspects of the problem of determining price differences. The discussion of regional differences was not considered essential to this report, which was based on national averages of both income and price data. The regional differences in the price data are present also in the income data, and in a sense regional variations in prices are offset by similar variations in income. I agree with Miss Reid that a more satisfactory approach is a regional or other geographic measurement. Unfortunately, neither the income nor the price data are as adequate on a regional basis as for the United States as a whole. Much could be gained if further investigations were made to determine the regional differences in income and in prices.

With reference to the remarks on the comparison of incomes, I agree that these calculations can be significantly improved. However, many of the adjustments suggested would counterbalance one another. For example, if farm income were adjusted to exclude the return on the farmer's investment, the disparity between the income of the farmer and of the city worker would be widened.

But if the income of farm operators were calculated to exclude all who were not considered full time commercial farmers, the disparity would be reduced. In addition, it must be admitted that the annual earnings of factory workers do not allow for unemployment. For the year under comparison, 1941, five million were unemployed, almost 10 percent of the total labor force. Thus, the adjustment for unemployed factory workers would also narrow the disparity in income.

However, data are not available for these adjustments. It is hoped that they will be collected in the near future. The Surveys of Consumer Incomes conducted by the Census Bureau and the Bureau of Agricultural Economics may provide material for comparisons between the average annual income of the full scale commercial farmer and the factory worker. At such time we may have a reasonable basis for improving the income comparisons.