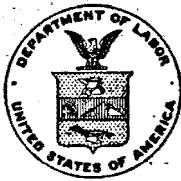
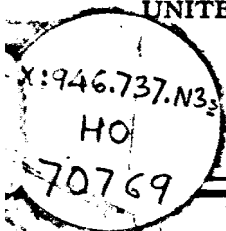

Money Disbursements of Wage Earners
and Clerical Workers in Eight Cities
in the East North Central Region
1934-36

By
FAITH M. WILLIAMS and ALICE C. HANSON
Assisted by GENEVIEVE B. WIMSATT
of the Bureau of Labor Statistics



Bulletin No. 636

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS



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PREFACE

The Bureau of Labor Statistics has been making studies of the money receipts and disbursements of wage earners and salaried workers since 1888. The first survey was initiated to provide information on wages and levels of living among American and European workers. Later studies, made in 1903 and 1918, were undertaken to secure weights for indexes of the cost of food and other goods purchased by families of wage earners and salaried workers.

The 1918 survey, in which data were obtained from 12,096 families at 7 different income levels, has supplied the weights for the cost of living indexes published currently by the Bureau of Labor Statistics. Since 1918, however, consumer purchasing habits and the articles available in the retail market have greatly changed. Many new types of articles which were not on the market in the earlier period are now commonly purchased by families of wage earners and clerical workers. Other goods in common use in 1918 are seldom or never purchased by workers' families of the present day.

The present survey, covering 2,694 families in eight cities in the East North Central region, is part of a Nation-wide survey undertaken to give a revised and complete account of the kinds of goods and services which represent the purchases of typical families of employed workers in 1934-36. The data obtained from each of the 2,694 families include information on annual incomes, housing facilities, current money expenditures for commodities and services separately and by groups of items, quantities of commodities purchased, and on net change in financial position during the year; that is, the amount of savings made or deficit incurred. They serve to answer many questions regarding the planes of living of American workers, their actual and potential demand for the commodities of agriculture, commerce, and industry, and the effectiveness of the operation of the economic system of our nation.

The surveys in the several cities were made in cooperation with various agencies, whose assistance is hereby gratefully acknowledged. In Columbus, the study was made in cooperation with the Ohio State University, Bureau of Business Research, Dr. Viva Boothe, acting director, and the Ohio Emergency Relief Administration; in Michigan, with the University of Michigan School of Education, Dr. A. B. Moehlman, head, and the Michigan Emergency Relief

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Administration; in Cincinnati, Cleveland, Indianapolis, and Milwaukee, with the Works Progress Administrations.

In the final analysis and preparation of this report, special contributions to problems of method were made by Jerome Cornfield, William S. Shelton, and Samuel E. Cohen. Mary C. Ruark was responsible for the final tabulations.

ISADOR LUBIN,
Commissioner of Labor Statistics.

MAY 1939.

Part IV.—Appendixes

Appendix A

Notes on Tabular Summary

General.

Economic family.—An “economic family” as defined for this study consists of two or more persons living together and sharing their economic resources. In most cases, the members of an economic family are related by ties of blood, marriage, or adoption, but in some cases, an unrelated member was found to share income and family living. Persons related by blood, marriage, or adoption were not treated as members of the economic family if they lived as boarders and kept their funds separate from family funds, unless they gave a complete record of their incomes and expenditures. Persons who were members of the economic family for an entire year were not necessarily members of the household for the year. A member supported by the family in school, college, or hospital for all or part of the year, or a member working away from home for part of the year, sharing his income with the family for that period and able to report all his expenses for that period would be treated as a member of the economic family but not of the household for the entire year. In computing the number of persons who were part of the economic family for a year, the number of weeks each member had shared his income with the family was listed, the numbers summed, and the total divided by 52. This procedure yielded the number of equivalent persons who had made up the family for 1 year.

Household.—The household has been defined to include the members of the economic family living together in one dwelling, plus roomers and guests sleeping in the family dwelling, plus boarders and guests eating with the family. The number of persons in the household was computed by adding the number of weeks each member of the family had been part of the family's housekeeping establishment, the number of weeks each boarder, lodger, and guest had been with them, and dividing the total by 52 in order to secure the number of equivalent persons making up the household for 1 year.

Net family income or net money income.—Net family income has been defined to mean the sum of earnings (including net receipts from boarders and lodgers), net rent, interest, dividends, gifts, pensions, insurance annuities received during the schedule year, minus business losses and expenses. The money value of income received in kind,

whether from services of the housewife, use of owned home, or from other sources, has not been included in computing income in this investigation. No funds received as a result of the depletion of assets have been treated as income. Similarly, inheritances have not been regarded as income.

Current expenditures.—Throughout the report the term “current expenditures” is used to mean expenditures for ultimate consumer goods, including relatively durable consumption goods. Interest on money borrowed for family use has been included in such expenditures, but savings and investments have not. The time and funds available for the investigation have not made possible the presentation of separate totals distinguishing expenditures for the more slowly consumed, as distinguished from quickly consumed goods. Indeed, the data on depreciation rates for relatively durable consumer goods are so fragmentary that it would be extremely difficult to do so. Expenditures for such durable goods as automobiles, mechanical refrigerators, and other furnishings and equipment have been classified with expenditures for food and carfare and other quickly consumed goods as “current expenditures,” while money spent for permanent improvements on owned homes and other real estate or as payment on the principal of mortgages has been classified as savings. The total cost of consumer goods purchased on credit was included in current expenditures and the amount of the obligations outstanding at the end of the year was taken into account when computing changes in liabilities over the 12-month period. Money paid out for life-insurance premiums has been classified as savings.

The total obligations incurred in the year covered by the schedule for consumers' goods purchased on credit was included in current expenditures and the amount of the obligation outstanding at the end of the year was taken into account when computing changes in liabilities over the 12-month period. For example, the total amount incurred for an item purchased on the installment plan (original price plus carrying charges) is entered as the amount of the expenditure, though the amount paid in the schedule year may be considerably less than the total contracted for; and the total amount of rent, taxes, etc., falling due in a year are entered as though paid, though they have been paid in part or not at all. The unpaid balances owing at the end of the schedule year on debts contracted during the schedule year are entered as increases in debts on table 4. Amounts paid during the schedule year on goods purchased on the installment plan before the beginning of that year are treated as savings. (See “Surplus,” p. 375; “Payment of debts to: Firms selling on installment plan,” p. 380; and “Increase in debts: Payable to firms selling on installment plan,” p. 380.)

Expenditures as entered on tables are purchase price less trade-in allowance, in cases where such trade-in allowances were made, for example, automobile and furniture purchases.

Surplus or deficit.—Surplus or deficit represents the difference between current income and current expenditures. Since the figures on both these amounts as secured by the schedule method are subject to an undetermined error of estimate (see “Balancing difference,” p. 376), the surplus and deficit data were obtained by asking in detail changes in individual asset and liability items over the schedule year. Net surplus or net deficit was computed as the net difference between the funds received during the schedule year not used for current expenditures and the funds made available for family use from sources other than money income (table 4; see also p. 18 of schedule facsimile, p. 427). It should be noticed that the emphasis is placed on net rather than gross figures for changes in assets and liabilities. That is, for an individual family, only net entries were made for an individual transaction such as a trade of property involving a net payment of \$500. Thus, the net change item is more significant than the absolute amount either of increase or decrease in assets or increase or decrease in liabilities.

Surplus.—Surplus, savings, and investment are terms used to mean net decrease in liabilities and/or increase in assets. This figure appears as the net change in assets and liabilities (when the total increase in assets and/or decrease in liabilities is greater than the total decrease in assets and/or increase in liabilities.) Money paid on the principal of real estate mortgages or spent for permanent improvements to real estate (such as the addition of a room to a house) has been treated as an increase in assets and hence as investment, as has also money spent for the purchase of stocks and bonds, building and loan shares, and other forms of permanent assets. Money used, for example, for the payment of installment obligations for an automobile purchased prior to the schedule year, is treated as decrease in liabilities and hence as a part of savings. Thus, money used for decreasing the liabilities of a preceding year, as well as that used to increase assets, has been treated as savings.

Deficit.—Deficit or negative savings is the term used to mean net increase in liabilities and/or net decrease in assets. This figure appears as the net change in assets and liabilities (when the total decrease in assets and/or increase in liabilities is greater than total increase in assets and/or decrease in liabilities) and is shown in tables 2, 5, 19, and 22 of the Tabular Summary. Money received through the sale of property, from the settlement or surrender of life insurance or endowment policies, and repayments by others of the loans made to them have been treated as money resulting from decreases in assets or changes in their form and thus may form part of deficits or negative

savings, but not of money income. Money borrowed either directly or as book credit is a form of increase in liabilities and hence may comprise a part of deficits or negative saving but is definitely not a part of money income.

Inheritance.—Money received by inheritance, essentially a windfall, cannot be treated as income because it is nonrecurring, nor as investment, because it may be spent during the year, nor can it be regarded as a decrease in assets in the same sense as withdrawal of savings or sale of property. Inheritance has, therefore, been treated as an independent item, forming a part of total receipts and coordinate with but not a part of current income and net change in assets and liabilities. It is shown in tables 2, 4, 5, 19, and 22. It includes only cash inheritances received during the schedule year. Inheritances of property not sold during the schedule year are not recorded.

Total money receipts.—The term "total money receipts" has been used to describe total money income plus deficits or net negative savings wherever they occur, plus money received through inheritance. This item is not shown as such in the Tabular Summary but it may be computed by adding for any desired group of families the following items: annual money income, net changes in assets and liabilities where the sign of the net change is minus (—), and inheritance.

Total money disbursements.—The term "total money disbursements" has been used to describe total current expenditures plus surpluses or net savings or investment wherever they occur. This item is not shown as such in the Tabular Summary but it may be computed by adding for any desired group of families the following items: annual current expenditure and net change in assets and liabilities where the sign of the net change is plus (+).

Balancing difference.—The difference between total disbursements and total receipts on any schedule was the balancing difference, and represented discrepancies due to inability of families to recall to the last penny every financial transaction of the year. No schedule was accepted in which this difference was greater than 5 percent of the larger figure.

Schedule year.—All data shown in the tables are for a 12-month period unless otherwise specified. The data secured from each family apply to the schedule year prior to the visit of the field investigator, ending with any one of four specified quarters: the winter quarter ending February 28, the spring quarter ending May 31, the summer quarter ending August 31, and the fall quarter ending November 30. For the purposes of the revision of the cost of living index, it was desired to secure material on seasonal variations in expenditures, and on this account data on purchases in different quarters were obtained for food, clothing, fuel and light, furniture and furnishings, automobiles and motorcycles, movies, and certain other items.

Averages based on all families.—All averages unless otherwise specified in the table are computed by dividing the appropriate aggregate by the total number of families in the group to which the aggregate applies and not by the smaller number of families in that group actually making the expenditure for or having the indicated item. The average expenditure per family purchasing a given item may be readily computed by multiplying the average for all families in the group by the number of families in the group to obtain the aggregate expenditure and dividing this figure by the number of families purchasing.

Sales tax.—See appendix A, page 391, for method of handling sales tax.

Notes on individual tables.

TABLE 1.—*Distribution of families, by economic level and income level*

Families have been classified by economic level according to the amount of current expenditures per expenditure unit, a measure which takes into account total family expenditure and family size and composition. The explanation of this measure and its use will be found on pages 25–29 and 431–438.

Families have been classified by income level according to the net family income, i. e., total family income minus nonfamily losses and business expense.

TABLE 2.—*Description of families studied, by economic level*

(See also tables 5, 19, and 22 for the same data by other classifications)

For tabulation the classification of occupations was made on the basis of the Works Progress Administration occupational classification. See appendix D, page 403.

The *homemaker* is the person reporting herself responsible for the management of the household, or in the case of two-generation families, the wife of the "head of the family."

Household and economic family are defined on page 373. In this table, a person in the household or economic family for less than a year is treated as the appropriate decimal equivalent of a person.

The equivalent number of persons in the household is computed by adding the total number of weeks spent in the household by each member of the household, and dividing the resulting aggregate by 52 (the number of weeks in a year). Number of equivalent persons in other categories listed in the table are computed in the same manner.

Earnings.—Earnings include wages, salaries, tips, industrial bonuses, and commissions. Amounts deducted by employers for pensions, insurance, annuities, etc., are included in earnings, and also entered in table 4 as payment of premiums for insurance policies. If a worker, as for example, in the building trades, pays a helper, the workers' earnings are entered as net, i. e., the pay to the helper is deducted.

Net earnings from boarders and lodgers are gross payments for board and lodging minus the calculated cost of food for boarders. The cost of boarders' food is computed by dividing each family's annual food expenditure by the number of food-expenditure units for all the persons eating in the household; the resulting food expenditure per food-expenditure unit is then multiplied by the number of food-expenditure units for boarders.

Other net rents are gross rents received from tenants less current expenditures including taxes paid out by the scheduled family in connection with the rented property.

Pensions and insurance annuities include veterans' pensions, pensions from employers, compensation received under workmen's compensation laws, unemployment benefits from trade-unions, etc., income from annuities purchased, and benefits from sickness, accident, theft, and fire insurance.

Gifts include money received from persons not members of the economic family. Such persons include persons members of the natural but not the economic family.

Other sources of income include net receipt from sale of home produce, winnings from gambling, court settlements, payment for child support, rebates, and dividend checks received on purchases bought through cooperative organizations, etc. In those cases in which a worker away from home received a cash subsistence allowance, the allowance was entered as other money income and the expenditures for meals, lodging, etc., were included in the proper expenditure tables. This case would be distinguished from that in which a salesman, for example, received an allowance for mileage; in such a case the travel expenditure was considered business expense and no entry was made either for expenditure or corresponding income with the exception that net gains on such an account are entered as other money income.

Deductions from income (business losses and expenses) includes nonfamily losses, i. e., net losses on rented property (current expenditures for property minus gross rents received) and current expenditures on any unrented real estate other than own home, etc., and net losses on traveling or subsistence allowances, and any other business expenses.

Nonbusiness losses, i. e., family losses, are not deducted from income but are treated as other family expenditures in table 16. For example, contents of a purse lost, or bail forfeited which had been posted for a friend, are treated as miscellaneous family expenditure.

Surplus or deficit.—See page 375.

Inheritance.—See page 376.

The *number of gainful workers per family* is the total number of persons gainfully employed at any time during the year. Each person is counted as one regardless of the length of his employment. The definition differs from that of the "gainfully occupied" as used by the census in that a person continuously unemployed throughout the year is not counted as a gainful worker. On the other hand a person is so counted even if his earnings were occasional and he does not necessarily regard himself as regularly in the labor market.

The *chief earner* is the member with the largest money earnings.

TABLE 3.—*Expenditures for groups of items, by economic level*

(See tables 6, 20, and 23 for same data by other classifications)

For the items included in each group of expenditures see table 8, Food; table 17 Clothing; table 10, Housing; table 11, Fuel, light, and refrigeration; table 12, Other household operation; table 18, Furnishings and equipment; table 13, Automobile and motorcycle purchase, operation, and maintenance, and other transportation; table 14, Personal care, medical care; table 15, Recreation; table 16, Education, vocation, community welfare, gifts, and contributions to persons outside economic family and other items.

Housing includes water, fuel, light, and refrigeration for families not making payment for these items separately from rent. (See tables 11 and 12.)

Percentages are based on rounded dollar averages.

TABLE 4.—Disposition of money received during the schedule year not used for current family expenditure and funds made available for family use from sources other than family income, by economic level

In these tables only the cash or credit changes in assets or liabilities as shown in transactions during the schedule year are entered. That is, purchase of a share of stock is entered as "Increase in assets: Investment in: Stocks and bonds," but increase in the value of a share owned but not sold during the year is not recorded.

For each individual family only the net amount of the change in any individual item, where the items correspond in the two tables, is entered on the schedule. For instance, if a family deposits \$200 in a savings account during the year and withdraws \$250, an entry of \$50 is made under "Decrease in assets: Reduction in cash: In savings account," and no entry is made under "Increase in assets: Increase in cash: In savings account." The aggregate upon which the average for the item "Decrease in assets: Reduction in cash: In savings account," in table 4 is based is then the sum of the net reductions of savings account balances of all families having net reductions in their savings account balances. Similarly the aggregate upon which the average for the item "Increase in assets: Increase in cash: In savings account" is based is the sum of the net increase in savings account balances of all families having net increases in their savings account balances.

A transaction affecting two different items, such as the payment of a mortgage and the receipt of a loan with which to make the payment, is generally not entered as a single net amount, but the total amounts of both the payment and the loan are entered separately.

It should be noted that not all items in the two sections of the table correspond. Payments of premiums of insurance policies are listed under "Average amount of funds disposed in: Increase in assets." The corresponding item, receipts in the form of annuities, is not listed under "Average amount of funds received from: Decrease in assets," but is entered in tables 2, 5, and 22 under "Receipts." Money from the sale of goods and chattels is entered in table 4, but purchases of goods and chattels are entered in the appropriate expenditure tables. Money from inheritances is entered in table 4, but contrasting payments by the family scheduled (bequests to nonmembers) are listed under current expenditures as Gifts and contributions (table 16).

Investment in: Improvement in own home includes permanent improvements such as the addition of a porch or room, or installation of wiring for electricity. Repairs and replacements are not considered improvements, and are entered in table 10 as current housing expenditures.

Investment in: Other real estate including real estate mortgages includes both improvements made on and purchase of real estate other than owned home. This item also includes purchase by the scheduled family of real estate mortgages.

Payment of premiums for insurance policies includes amounts deducted from wages for company insurance; trade-union dues when these entitled the payer to insurance benefits; payments to other organizations when they entitled the payer to insurance benefits; payments for combined life and sickness and disability insurance when the amounts assignable to sickness and disability insurance are considered the smaller part of the total; "burial insurance" and payments to burial societies; and payments for life-insurance premiums for persons not members of the economic family.

Increase in outstanding loans to others includes increase in loans to any persons not members of the economic family.

Payment of debts to: Firms selling on installment plan includes only payments for purchases made prior to the beginning of the schedule year. The entire amounts due for goods purchased on installment during the schedule year are entered in the appropriate expenditure tables.

Payment of debts to: Individuals includes payment of debts incurred prior to the schedule year to tradesmen, physicians, landlords, and other persons.

Payment of debts to: Other includes payment of debts incurred prior to the schedule year on charge accounts, taxes, assessments, etc.

Sale of property: Goods and chattels does not include articles "traded in" on the purchase. When, for instance, an allowance was made for the trade-in of an old ice box in the purchase of a refrigerator, the amount of the allowance is not entered in any of the tables and the expenditure shown for the refrigerator (in table 18) is the price less the allowance. The same procedure was followed for automobiles, radios, and other items for which articles were "traded in" for credit.

Increase in liabilities includes debts incurred during the schedule year even though these were later wiped out by bankruptcy proceedings.

Increase in debts: Payable to firms selling on installment plan includes balances due at the end of the schedule year on goods purchased on installment during the schedule year. For example, if a family incurred a bill of \$250 during the schedule year for a suite of furniture purchased on the installment plan and paid installments totaling \$150 during the year, having a balance still owing of \$100 at the end of the schedule year, the following entries would appear: In table 18, current expenditure for furniture suite, \$250; in table 4, increase in debts payable to firms selling on installment plan, \$100.

Increase in debts: Payable to individuals includes unpaid debts incurred during the schedule year to tradesmen, physicians, landlords, and other persons.

Increase in debts: Other debts includes unpaid debts incurred during the schedule year on charge accounts, taxes, assessments, etc.

Inheritance.—See page 376.

TABLE 5.—*Description of families studied, by income level*

(See tables 2, 19, and 22 for same data by other classifications)

Data presented in this table are the same as those in table 2, except that the families have been classified by net family income level rather than by economic level. (See notes on table 2.)

TABLE 6.—*Expenditure for groups of items, by income level*

(See tables 3, 20, and 23 for same data by other classifications)

Data presented in this table are the same as those in table 3, except that the families have been classified by net family income level rather than by economic level. (See notes on table 3.)

TABLE 7.—*Food used at home and purchased for consumption at home during 1 week, by economic level*

In order to avoid overburdening the housewives who cooperated in the study the details of food purchases were requested only for the week preceding the agent's visit. In most cities the field work extended over more than one season. The differences between the averages secured in the several quarters in such instances reflect not only seasonal differences in food purchases, but also accidental differences in the economic level and the national backgrounds of the families in the subsamples interviewed in the different quarters. It was therefore decided to publish in full for each city only the estimates for that season in which data were secured from the largest number of families.

The number of equivalent full-time persons shown in table 7 is obtained by counting the total number of persons eating 21 meals at home during the week as the appropriate decimal equivalent of a person. A lunch prepared at home but carried and eaten away from home is included as a meal eaten at home.

For the method of obtaining the number of food-expenditure units, see appendix G, pages 431-432.

The quantities and expenditures entered in table 7 are for all food purchased for use by the household at home or prepared at home to be taken out during the week, including that for boarders, guests, and servants.

Data were obtained for each of the following items—"number of families purchasing," "number of families using", "average quantity purchased," "average quantity used"—as well as "expenditure." Since the quantities purchased and quantities used in 1 week were in the great majority of cases identical, only data on quantities purchased are presented in table 7. These figures may be compared with the figures on expenditure. Likewise, for most, although not all of the food items, the number of families purchasing and the number using was the same. Because of limitation of printing space, only the figures for families using are presented, they being needed to obtain a complete picture of food consumption habits of the families studied.

If comparisons are made between expenditures for quantities of foods at different economic levels, it should be noted that the composition of the families changes from one level to another. There are in general a larger proportion of adults at the higher economic levels. Since human needs for and customary consumption of various specific foods vary considerably for persons of different age and sex and occupation, it becomes impossible to make a strict comparison of food consumption with needs at the different economic levels. Thus the needs for carbohydrates, protein, vitamins, etc., increase in differing ratios for different sex-age groups; children's need for milk is approximately twice as great as that for adults, while the need of heat-producing foods (starches and sugars) of adults is about twice as great as that of children. Children's meat consumption varies from that of adults at a still different rate. In order to secure figures on quantities of and expenditures for individual foods purchased which would provide a reasonably satisfactory basis for comparison and yet not present a misleading appearance of refinement, data on family purchases of individual foods have been converted to a per capita basis.

Expenditures or quantity per food-expenditure unit may be computed by multiplying the average expenditure or quantity per person shown by the average number of persons per family and dividing the product by the average number of food-expenditure units per family. However, in interpreting such results, the factor pointed out in the preceding paragraph must be considered, namely that a single food relative scale cannot be correctly descriptive of needs of persons of different sex and age for varying types of specific foods.

In considering quantities purchased it must be remembered that "pounds" are a measure of weight only, not of nutritional equivalence.

TABLE 8.—*Annual food expenditures, by economic level*

The figures for average annual expenditures for food exclude the computed cost of food consumed by boarders.

For the method of obtaining the number of food-expenditure units see appendix G, pages 431-432.

Meals bought and eaten away from home include tips.

Candy, ice cream, drinks, etc., bought and eaten away from home includes expenditure for all between-meal food and drink consumed away from home.

TABLE 9.—*Housing facilities, by economic level*

The facilities described in this table apply to the dwelling occupied by the family at the end of the schedule year, and which may or may not have been the family's dwelling unit during the entire schedule year. No attempt was made by the field agents to determine whether or not a facility met any defined standard either as to quality or as to state of repair.

Average monthly rental rate is the rental rate for the house inhabited by the family at the end of the schedule year. (Note that this rate is not necessarily the same as that shown in table 10, Housing expenditures, which is the average rate paid throughout the year.)

A *detached* house is free, standing with open space on all sides; a *semidetached* house has open space on three sides; a *row* house has open space on two sides; a *two-family* house is one designed for occupancy by two families, one above the other.

Multiple dwelling.—A building designed for occupancy by three or more families has been classed as a multiple dwelling.

Garden space is defined as space actually devoted to a garden or to a lawn on the premises or belonging to the dwelling.

TABLE 10.—*Housing expenditures, by economic level*

The type and amount of expenditure by a family for housing necessarily vary with type of tenure, dwelling, and manner of payment for heating. Separate sections of the table are therefore presented for families who can be classified into homogeneous groups with respect to housing expenditures. These are: II, "Home owners"; III, "House renters"; IV, "Apartment renters with heat included in rent"; V, "Apartment renters with heat not included in rent." Families whose housing arrangements changed during the year are not shown separately, but are included in section I, "All families in survey." Section I therefore includes families shown in sections II, III, IV, and V, and families with the following housing arrangements: Owning a principal home during part of the year and renting a principal home during part of the year; having as a principal home a house for a part of the year and an apartment for a part of the year; renting as principal home an apartment with heat included in rent for a part of the year and an apartment with heat not included in rent for a part of the year.

A *vacation home* is one which the family has for vacation purposes, and rents or owns simultaneously with its principal home. Simultaneous rental or ownership of a vacation home does not exclude families in sections II, III, IV, and V.

Investment in home includes down payments, payment of principal on mortgages, and permanent improvements (not repairs) on home.

In cases where the home owned and occupied by the family was a two-family house, only that portion of the investment or expenditure which applied to the owner's own living quarters has been included under "Average amount invested" or "Average current housing expenditure." The proportions used in making this allocation were based on the comparative monthly rental values of the two dwellings under consideration. The amount of housing expenditure allocated to the rented portion of the house was deducted from the gross rent received from the tenant to arrive at "Other net rents" (tables 2, 5, 19, and 22). The amount of the investment allocated to the rented portion of the house was entered as "Investment in other real estate" (table 4).

Taxes.—Amounts due on "taxes on owned home" are entered under this heading even if unpaid at the end of the schedule year. The amounts unpaid at the end of the schedule year are also entered in table 4 as "Increase in debts: Other debts."

Fire insurance and liability insurance.—No attempt was made to prorate payments for previous or coming years. The total amount paid during the year was considered current expenditure.

Rent.—The rent reported covered the use of such facilities as heat, light, furniture, and water when these were provided by the landlord.

Families living in rented homes and subrenting portions as apartments were scheduled provided there were separate meters for gas and electricity, that heat costs could be estimated, and that not more than two families (including the scheduled family) had dwellings there. In such cases only that amount of the rent, operating expenditures, and expenditure for repairs which applied to the portion of the house occupied by the scheduled family was entered. The remaining expenditures for rent, operating, and repairs were deducted from the gross rent received from the tenant to arrive at "Other net rents" (tables 2, 5, 19, and 22). The proportions used in allocating housing expenditure between the two families were based on the comparative rental rates of the two dwellings.

No attempt was made to allocate the cost of space rented to roomers.

Amounts due on rent are entered here even if unpaid at end of schedule year. The amounts unpaid at end of year are also entered on table 4 as "Increase in debts: Other debts."

Concessions are defined as the money value of rent given free by the landlord for a short time as an inducement to the family to rent the living quarters or to offset the expense of moving.

Apartments are defined as dwellings in multiple dwellings or in two-family houses designed for occupancy by two families, one above the other. (See notes on table 9, p. 382.) A dwelling consisting of rooms set apart for the use of the scheduled family within a house originally designed for occupancy by one family was also classed as an apartment.

Rooms.—In the count of the number of rooms, dining rooms, living rooms, bedrooms, libraries, sewing rooms, kitchens, kitchenettes, and enclosed porches are included. Halls, closets, storerooms, pantries, open porches, laundries, alcoves, rooms used for business purposes, dinettes, and bathrooms are not included.

TABLE 11.—*Fuel, light, and refrigeration expenditures, by economic level*

The type and amount of expenditure by a family for fuel, light, and refrigeration necessarily vary with type of dwelling and manner of payment for heating. Separate sections of the table are therefore presented for families whose expenditures for fuel, light, and refrigeration may be considered homogeneous. Families whose type of dwelling or arrangement for payment for heating changed during the year are not shown separately but are in section I, "All families in survey." Section I therefore includes families shown in sections II, III, IV, and V and families with the following arrangements for type of dwelling or payment for heating: Having a house part of the year and an apartment for part of the year; having heat included in rent or ownership payments during part of the year and not so included during part of the year; renting a home for part of the year and owning a home for part of the year.

It should be noted that several items listed in this table might have been used for purposes other than heating, cooking, lighting, and refrigeration. For instance, electricity is used for radios, curling irons, etc.; gasoline is used for cleaning.

TABLE 12.—*Household operation expenditures other than for fuel, light, and refrigeration, by economic level*

Water rent includes only water rent paid separately from rent for dwelling.

Telephone includes both subscription and pay-station costs.

Domestic service includes maid service, laundress, furnace man, etc.

Household paper includes toilet paper, wax paper, shelf paper, etc.

Stationery, pens, pencils, ink.—Expenditures for school supplies are entered in table 16 under "Formal education."

Insurance on furniture is generally paid for a 3-year period. The entire expenditure was entered without regard to the period covered.

Interest on debts does not include interest paid on mortgages on home (table 10).

Other items includes shoe polish, candles, clothes pins, clothes lines, grass cutting, snow shoveling, and tips to maids, janitors, elevator boys, and garbage collectors, etc.

TABLE 13.—*Transportation expenditures, by economic level*

The expenditure shown for purchase of automobiles and motorcycles is the purchase price less allowances for the trade-in of old cars and includes carrying charges for installment purchases.

Trolley.—The one Lansing family reporting trolley expense made this expenditure outside of Lansing.

Rent of automobile and/or motorcycle includes expenditures for gasoline, oil, etc. for a vehicle not owned by the family. It usually covered payment to a neighbor for rides to work in his car, or payment for gasoline and oil for operation of a borrowed car.

Other transportation expense includes dues for membership in automobile clubs.

TABLE 14.—*Personal care expenditures and medical care expenditures, by economic level*

Personal care services.—A combination beauty or barber service charge was prorated among the services supplied.

Other waves includes marcel, water, or finger wave.

Other personal care services includes facial treatments, massage, etc.

Toilet soap does not include laundry soap used for personal care.

Tooth powder, tooth paste, mouth washes does not include soda and salt used for the cleaning of teeth.

Cosmetics and toilet preparations includes paper handkerchiefs and sanitary napkins as well as face powder, rouge, perfume, etc.

Under "Brushes, razor blades, and other toilet articles" are included compacts and mirrors.

Medical care.—Frequently families knew definitely the total expenditure incurred for an illness but were not sure of the correct allocation among such items as physicians' services, hospital room, operating room charges, and medicines. Whenever possible flat rate charges for such services as obstetrical care or tonsillectomy were prorated among the services received. Where information for such prorating could not be furnished, the entire charge was entered as expenditure for general practitioner, specialist, or clinic, as the case might be. Therefore expenditures for total medical care are probably more accurate than expenditures for individual items of medical service.

Specialist and other practitioner includes heart specialists, pediatricians, eye, ear, nose, and throat specialists, osteopaths, chiropractors, midwives, Christian Science practitioners, etc.

Medicine and drugs includes the cost of filling prescriptions, home remedies, patent medicines, adhesive tape, bandage, etc. Cod-liver oil was classified as a food. (See table 7.)

Eyeglasses includes the cost of examination when the examination was given by the same person or firm from whom glasses were purchased.

Medical appliances includes hot water bottles, crutches, etc.

Accident and health insurance.—When accident and health insurance premium payments are included with payments for life insurance and the life insurance portion is considered the greater, the expenditures are not entered in table 14 but in table 4 under "Payment of premiums for insurance policies: Life insurance."

Other medical care includes expenditures for X-ray, operating room, blood transfusions, circumcision, etc.

TABLE 15.—*Recreation expenditures, by economic level*

Cameras, films, and photographic equipment includes cost of films and developing.

Athletic equipment and supplies does not include clothes for sports. Expenditures for sport clothes are entered in table 17.

Pets (purchase and care) includes dog licenses and food purchased especially for pets.

Entertaining: In home, except food and drinks includes bridge prizes, etc.

Other recreation includes amusement park and dance hall admissions, 1-day boat excursions, losses at cards, gambling and betting, cost of lottery tickets, Christmas-tree decorations, expenditures for hobbies not elsewhere classified, admission to fairs, spending money assigned to individual family members of which no account could be given.

TABLE 16.—*Formal education, vocation, community welfare, gifts and contributions, and miscellaneous expenditures, by economic level*

Formal education

Expenditures for *members away from home* include tuition and school supplies but not the cost of board and lodging or school uniforms for members attending school away from home.

Expenditures for *members at home* include tuition, books, stationery and supplies, fees for music and dancing lessons, etc., paid for by the economic family.

Vocation

Union dues or fees.—Payments to trade-unions with life insurance plans, where dues and life insurance premium payments cannot be separated, are entered on table 4 as "Payments of premium for insurance policies: Life insurance."

Other items of vocational expense include chauffeurs' licenses, tools, fees to employment offices, etc.

Community welfare

Taxes.—Does not include taxes on owned home (see p. 382) or on other real estate (see p. 378) or sales tax (see p. 391) or automobile licenses and taxes or indirect taxes.

Gifts and contributions

This section includes only gifts to persons not members of the economic family. Gifts to organizations or institutions are not included, but are listed under "Community welfare."

Christmas, birthday, etc., gifts include money, gifts, and purchase price of items given to nonmembers of the economic family.

Support of relatives includes money sent to relatives whether living in the United States or in foreign countries. It also includes contributions to the funeral expense of a relative not a member of the economic family.

Miscellaneous expenditures

Losses includes only family or nonbusiness losses. Examples of such losses are payment of notes of personal friends endorsed by members of the economic family; bail forfeited which had been posted for a friend; premiums paid during the schedule year on insurance or annuities forfeited through failure to keep policies up to date; accidental loss of cash; payments on items bought on the installment plan and lost for nonpayment on installments, without recompense for amounts paid. Business losses are deducted from family income, see page 378.

Other includes dues and contributions to political organizations, expenses for marriage licenses, christenings, bail, fines not connected with traffic violations, etc.

TABLE 17.—*Clothing expenditures, by economic level*

All figures in table 17 with the exception of those in section I are based upon data for persons dependent on family funds for 52 weeks. Expenditures for persons dependent on family funds for less than 52 weeks are not shown in the sections for different sex and age groups but are included in the total shown in section I. These expenditures have been excluded from the detailed sections for the reason that clothing expenditures for a person dependent on family funds for only part of the year would be unrepresentative, since the family might buy all or none of the year's clothing supply for that person during the period he was dependent on family funds.

In addition to the data shown in the clothing table, the following totals and averages, if desired, may readily be computed from the data in the table:

1. Average number of articles purchased per person purchasing.¹
2. Average expenditure per person purchasing.¹
3. Average number of articles purchased per family having members in the designated group.
4. Average expenditure per article per family having members in the designated group.
5. Average price paid per article purchased.
6. Average number of articles purchased per family (all families).
7. Average expenditure per family (all families).

(1) To secure the average number of articles purchased per person purchasing¹ in a given sex and age group at a given economic level, multiply the average number of articles purchased per person (all persons) by the total number of persons in the specified group. This result is the total number of articles purchased. This figure divided by the number of persons purchasing¹ yields the average number of articles purchased per person purchasing.¹ For example, using figures on number of felt hats purchased for white men 18 years of age and over in families with unit expenditure under \$400:

a. Total number of families.....	839
b. Number of families having men 18 years of age and over.....	821
c. Number of men 18 years of age and over.....	1,033
d. Average number of men per family having men.....	1.26
Hats (felt):	
e. Number of persons purchasing.....	363
f. Average number of articles per person (all persons).....	0.38
g. Average expenditure per person (all persons).....	\$1.00
h. Total number of hats purchased ($f \times c$).....	393
i. Average number of hats purchased per person purchasing ¹ ($h \div e$).....	1.08

¹ Or person for whom purchased.

(2) Similarly to obtain the average expenditure per person purchasing¹ in a specified sex and age group at a given economic level multiply the average expenditure per person (all persons) by the total number of persons in the specified group. This result is the total expenditure for hats for this group, which when divided by the number of persons purchasing¹ yields the average expenditure per person purchasing.¹ For example, using the figures given above:

j. Total expenditure for hats by the group ($g \times c$).....	\$1, 033. 00
k. Average expenditure for hats per person purchasing ¹ ($j \div e$)	2. 85

(3) To obtain the average number of articles purchased per family having members in a designated sex and age group at a given economic level, divide the total number of articles purchased in that group (computed in accordance with the instructions in paragraph (1) above) by the number of families in the group. For example, again using the figures given above:

h. Total number of hats purchased ($f \times c$).....	393
(Note this total has already been computed above.)	
l. Average number of hats per family in the group ($h \div b$) ...	0. 48

(4) To obtain the average expenditure per article per family having members in a designated sex and age group at a given economic level, divide the total expenditure per article (computed in accordance with the instructions in paragraph (2) above) by the number of families in the group. For example, using the same figures given above:

j. Total expenditure for hats by the group ($g \times c$).....	\$1, 033. 00
(Note this total has already been computed above.)	
m. Average expenditure for hats, per family in the group ($j \div b$).....	1. 26

(5) To obtain the average price paid per article purchased divide the total expenditure for a given article for a given sex and age group at a given economic level (as computed in accordance with the instructions in paragraph (2) above) by the total number of articles purchased (as computed in accordance with the instructions in paragraph (1) above). For example, using figures shown above:

j. Total expenditure for hats by the group ($g \times c$).....	\$1, 033. 00
(Note this total has already been computed.)	
h. Total number of hats purchased ($f \times c$)	393
(Note this total has already been computed.)	
n. Average price paid per article purchased ² ($j \div h$)....	\$2. 63

(6) To obtain average number of articles purchased per family (all families) at a given economic level, divide the total number of articles purchased by all families at that economic level. For example, using the same figures:

h. Total number of hats purchased.....	393
o. Average number of hats per family ($h \div a$).....	0. 47

(7) To obtain average expenditure per family (all families) at a given economic level, divide the total expenditure for the given article by all families at that economic level. For example, using the same figures:

j. Total expenditure for hats by the group ($g \times c$).....	\$1, 033. 00
p. Average expenditure for hats per family ($j \div a$).....	1. 23

¹ Or person for whom purchased.

² The average price paid for an article purchased should not be computed by dividing the "average expenditure per person" by the "average number of articles per person." Such a computation would lead to slight inaccuracies in the second decimal place, because of rounding both the dividend and divisor before division.

Section I.—For method of computation of *number of clothing expenditure units per family* see appendix G, pages 433-436. This computation is based on all members of the economic family, whether or not they were dependent on the family fund for 52 weeks.

Ready-made clothing, dry cleaning, and accessories includes all items listed in sections III through XI for persons dependent on family funds for 52 weeks plus such expenditures for persons dependent on family funds for less than 52 weeks.

Yard goods and findings.—Findings include thread, needles, scissors, buttons, etc.

Clothing received as gifts includes neckties, stockings, etc., received as Christmas and birthday gifts from persons outside the economic family. It also includes second-hand clothes given to the family.

Expense for uniforms, etc., for work are included in clothing expenditures (not as vocational expense in table 16 nor as losses or business expense in tables 2, 5, 19, and 22).

Section II.—The figures in section II are based on data only for persons dependent on the family funds for 52 weeks.

Sections III through XI.—In these sections the figures are based on data only for persons dependent on the family funds for 52 weeks. *Total* for each sex and age group does not include expenditures for yard goods and findings and paid help for sewing. These are presented only in section I for all sex-age groups combined.

Boys: Play suits.—Are heavy suits for children's outdoor wear.

Men and Boys: Shoes, work.—Are shoes for heavy work, not, for example, shoes worn to work by a white-collar employee.

Men and Boys: Shoes, other.—Includes bedroom slippers.

Men and Boys: Accessories.—Includes belts, suspenders, collar buttons, shoe-strings, etc.

Men and Boys: Other.—Includes jewelry and watches, and rental charges for uniforms and aprons. In cases where rental and laundering charges for uniforms and aprons could not be separated, the entire amount is entered here.

Women and Girls: Dresses, cotton, house.—Are defined as cotton dresses bought for housework.

Women and Girls: Accessories.—Includes hairpins, hairnets, belts, sanitary belts, dress ornaments, etc.

Women and Girls: Other.—Includes jewelry and watches, and rental charges for uniforms and aprons. In cases where rental and laundering charges for uniforms and aprons could not be separated the entire amount is entered here.

TABLE 18.—*Furnishings and equipment expenditures, by economic level*

For the method of entry of expenditures for items bought on the installment plan and with trade-in allowances see pages 374, 375, and 380.

For computation of averages other than those presented in this table, for example, "average number of articles purchased per family purchasing" or "average expenditure per family purchasing," calculations similar to those outlined for table 17 can be made (see pp. 386 and 387).

Textile furnishings: Other.—Includes paid help for making curtains, furniture covers, etc., and yard goods used in making home furnishings.

Miscellaneous equipment: Other.—Includes paint and lumber for repair of household equipment, play pens for children, and typewriters.

Note that radios are not classed as "Furnishings and Equipment" but as "Recreation," table 15.

TABLES 19 and 20.—*Description of families studied at three economic levels and expenditures for groups of items at three economic levels*

(See tables 2, 3, 5, 6, 22, and 23 for same data by other classifications)

These tables are presented with families classified into three economic levels in order to facilitate comparison with the data from other cities which will be classified for these three levels and published in other bulletins. The greater size of the sample in larger cities permitted a finer break-down in tables 2 and 3 than was justified by the data for the smaller samples. In tables 19 and 20 the same data as in tables 2 and 3 are grouped into identical classifications regardless of size of sample, as follows: Families spending under \$400 per expenditure unit per year, those spending \$400 to \$600, and those spending \$600 and over.

TABLE 21.—*Distribution of families of types comparable with those studied in 1917-18, by economic level and income level*

TABLE 22.—*Description of families of types comparable with those studied in 1917-18, by income level*

TABLE 23.—*Expenditures of families of types comparable with those studied in 1917-18 for groups of items, by economic level*

(See tables 1, 2, 3, 5, 6, 19, and 20 for same data for all families in present study)

Since the rules for inclusion of families in the 1917-18 study differed from those in the 1934-36 study, data for the family types in the latter study most nearly meeting the eligibility requirements of the former study are presented in these tables to facilitate comparison. Data for families of the following types are included: Man, wife, and one child; man, wife, and two to four children; man, wife, and five or more children; man, wife, and children and adults (four to six persons); and man, wife, children, and adults (seven or more persons).

TABLE 24A.—*Coefficients of variation of money disbursements*
and

TABLE 24B.—*Coefficients of variation of money disbursements at successive income levels*

The coefficient of variation is computed by dividing the standard deviation by the average expenditure and multiplying by 100. The standard deviation represents the square root of the mean of the squares of the differences between each item and the arithmetic average of the items.

The purpose of the coefficient of variation is to express as a percentage the dispersion about the average, independently of the size of that average. The variation of expenditures for items of different magnitude can thus be compared directly. For example, in dollars, expenditures for food are typically much greater than those for personal care. Nevertheless their variation may be compared through a figure which expresses dispersion about the mean in relative terms, the coefficient of variation.

When families are distributed by the amount of their expenditures for various groups of items, it is found that the curves for food and housing most nearly resemble the normal curve, although more families are to be found above the mode than below it. Among the other major categories of expenditure, those for furnishings and equipment, transportation, and medical care have a distribution far from that of the normal curve. Many families made no expenditures or spent very small sums for these items; a few families spent relatively large sums. Only

a small number of the families spent sums near the average expenditure; in other words such distributions are very much skewed. Therefore, the coefficients of variation are of value in showing the extent of the dispersion but they should not be used to estimate the range within which a given proportion of the values from a new sample would fall.

The rank order of the coefficients of variation by income level for seven cities in six different regions (see Tabular Summary, table 24 in bull. 637, vol. I and tables 24B in bulls. 636, 637, vol. II, 639, and 640) was studied to see if the differences between the variations for the items shown at the several income levels were statistically significant. A significant decrease in variability at higher income levels (i. e., a negative correlation between income level and size of coefficient of variation) was found in expenditures for clothing, furnishings and equipment, and medical care. For other items of expenditure and for surplus and deficit, no significant decline was found. When all expenditure items for each city were ranked in order of variability from low to high income levels, in only three of the seven cities was decreasing variability found to be significant. (For method, see Milton Friedman, "The use of ranks to avoid the assumption of normality implicit in the analysis of variance," Jr. Amer. Stat. Ass'n., vol. 32, No. 200, pp. 675-701.)

TABLE 25.—*Expenditures for groups of items estimated from regression equation*

The figures in this table were computed by fitting a regression line to the actual expenditure data, using the equation $Y=a+bX^{\frac{1}{2}}+cX$, where X is annual net income. The average actual expenditure of each three hundred dollar income group was given equal weight in fitting the curve.

Experiments were carried out with straight lines and other forms of curves and with various systems of weighting. For personal care, medical care, household operation other than fuel, light, and refrigeration, gifts, and miscellaneous items there appeared to be a true linear relationship. For food, clothing, housing including fuel, light, and refrigeration, transportation, recreation, and furnishings and equipment, the equation $Y=a+bX+cX^2$ gave a better fit than did the equation $Y=a+bX$. However, for several cases, particularly that of housing, the curve yielded by the equation $Y=a+bX+cX^2$ turned downward at the higher income levels, so that at very high income levels there appeared to be actually a negative expenditure for housing. The equation $Y=a+bX^{\frac{1}{2}}+cX$ gave an equally good fit for those expenditure items which appeared to have a definitely linear relationship to income and also had the added merit that it did not turn downward at higher income levels for those items for which a curvilinear relationship was indicated.

Use of the average actual expenditure for each income group yielded practically the same results as would have been obtained by using each individual observation, and resulted in a material economy of time. Weighting by number of cases, total expenditure, or the ratio of total expenditure to the number of cases, etc., materially increased the amount of work and time required for fitting, but did not yield significantly better results.

Local Conditions Affecting the Data

Cost of Living.

The average level of living costs for the period to which the data secured apply is available for four of the cities covered in this region by the Bureau of Labor Statistics' indexes of the cost of goods purchased by wage earners and clerical workers. Taking average costs in 1923-25 as 100, the indexes applying to the entire period covered

in each city are as follows: Cincinnati, 84.9; Cleveland, 81.7; Detroit, 72.7; and Indianapolis, 79.3. It must be remembered that the base used for the index in each city is not identical, but varies with the income and consumption habits of the workers of the city. These indexes, therefore, can only be used to measure relative changes in costs within a given city and not to measure differences in costs between cities.

Sales tax.—In cities where a sales tax was in effect, the amount of tax is included in the expenditure for the indicated article. An exception occurs in Tabular Summary, table 7, where sales tax is computed on all the articles of food purchased during the week combined and entered as a separate item.

Michigan.—A tax of 3 percent on "sales at retail" was in effect from July 1, 1933, through the entire period of scheduling in Detroit, Grand Rapids, and Lansing. The tax was levied on purchases of all goods including sales of electricity for light, heat, and power, natural and artificial gas, and water. There was, however, no tax on municipally owned public utilities (electricity, gas, and water). Newspapers were not taxable, but the tax did apply to the sale of magazines. Services were not taxable.

Ohio.—In January 1935 a 3-percent tax on all items of retail purchase except milk and bread went into effect in Ohio, thus affecting the data from Cincinnati and Cleveland, but not from Columbus. Newspapers, gas bills, electricity bills, streetcar fares, and telephone bills were exempted, as were sales of gasoline, oil, tobacco, and liquor, which were already taxed by the State. For purchases of less than a dollar, the tax was applied as follows:

<i>Amount of sale</i>	<i>Tax</i>
\$0 to \$0.08.....	No tax
\$0.09 to \$0.39.....	\$0.01
\$0.40 to \$0.69.....	.02
\$0.70 to \$1.08.....	.03

Indianapolis and Milwaukee.—No sales tax was in effect in these cities during the period of the surveys.

Relief.

The number of families on relief in the cities in this region during the month of the survey when the relief load was at a peak is shown in table A. The percentages which such families formed of total families of two or more persons according to the 1930 census are indicated in the last column.

TABLE A.—Number of families of 2 or more persons on relief ¹ in the period covered by the survey when relief was at a peak

Reporting area	Month with maximum relief load during period covered by the survey	Number of families of 2 or more persons on relief in that month	Average size of these families	Percentage which these families form of families of 2 or more persons in 1930
<i>White families</i>				
Hamilton County (Cincinnati).....	March 1935.....	19,700	4.4	14.9
Cuyahoga County (Cleveland).....	July 1935.....	43,000	3.9	16.3
Franklin County (Columbus).....	April 1934.....	9,300	4.2	11.9
Detroit.....	December 1934.....	40,800	4.3	12.6
Grand Rapids.....	do.....	8,400	4.0	21.0
Marion County (Indianapolis).....	March 1935.....	13,000	4.1	13.9
Ingham County (Lansing).....	November 1934.....	6,200	4.4	22.2
Milwaukee County (Milwaukee).....	March 1935.....	25,800	4.3	15.5
<i>Negro families</i>				
Hamilton County (Cincinnati).....	do.....	12,500	4.1	² 31.0
Marion County (Indianapolis).....	do.....	6,200	3.7	60.4

¹ Estimates of the number of families of 2 or more persons on relief were furnished by the Division of Social Research of the Works Progress Administration.

² Based on the estimated number of Negro families of two or more persons in Hamilton County in 1935. Research Bureau, Regional Department of Economic Security, Employment Center, Cincinnati, Ohio. The population of Hamilton County, Ohio, in 1935. 2 vols. Mimeographed.

Appendix B

Scope of the Investigation

Geographic area covered in cities in the East North Central region.

The families studied in the region covered in this bulletin were confined to the city limits in Columbus, Grand Rapids, and Lansing. In Cincinnati it was found that such a large proportion of the industrial population lived in the suburbs that the sample would not be representative without the inclusion of families living in Elmwood, St. Bernard, and Norwood. Likewise suburbs were included in the sampling area for Cleveland, Detroit, Indianapolis, and Milwaukee.¹

Scope of the Nation-wide study.

In addition to the 8 cities studied in the East North Central region, 34 other cities with population over 50,000 were covered in the investigation of money disbursements of wage earners and lower-salaried clerical workers. Data from both native and foreign-born white families were secured in all cities, and from Negro families in the cities indicated in the following list. The results of investigations in the other large cities are summarized in 6 bulletins, as follows:

North Atlantic Region, New York City (B. L. S. Bull. 637, vol. I): White and Negro families.

North Atlantic Region, Eleven Cities (B. L. S. Bull. 637, vol. II):

Boston, Mass.	Pittsburgh, Pa. (white and Negro families).
Buffalo, N. Y.	Portland, Maine.
Johnstown, Pa.	Rochester, N. Y.
Lancaster, Pa.	Scranton, Pa.
Manchester, N. H.	Springfield, Mass.
Philadelphia, Pa. (white and Negro families).	

West North Central and Mountain Region (B. L. S. Bull. 641):

Denver, Colo.	St. Louis, Mo. (white and Negro families).
Kansas City, Mo. and Kansas City, Kans. (white and Negro families).	Salt Lake City, Utah.
Minneapolis and St. Paul, Minn.	

Southern Region (B. L. S. Bull. 640):

Baltimore, Md. (white and Negro families).	Memphis, Tenn. (white and Negro families).
Birmingham, Ala. (white and Negro families).	Mobile, Ala. (white and Negro families).
Dallas, Tex.	New Orleans, La. (white and Negro families).
Houston, Tex. (white other than Mexican and Mexican families).	Norfolk and Portsmouth, Va. (white and Negro families).
Jackson, Miss. (white and Negro families).	Richmond, Va. (white and Negro families).
Jacksonville, Fla.	
Louisville, Ky. (white and Negro families).	

¹ The suburbs included in the Cleveland area were: East Cleveland, Lakewood, Cleveland Heights, Shaker Heights, Garfield Heights, Maple Heights, Newburgh Heights, Cuyahoga Heights, and Brooklyn Heights; in the Detroit Area were Hamtramck and Highland Park; in the Indianapolis area, all towns served by the Indianapolis St. Ry. Co., including Speedway City, also Maywood and Beach Grove; in the Milwaukee area, West Allis, West Milwaukee, and Wauwatosa.

Pacific Region (B. L. S. Bull. 639):

Los Angeles, Calif. (White other than Mexican and Mexican families).	San Diego, Calif.
Sacramento, Calif.	San Francisco, Calif.
	Seattle, Wash.

42 Cities in the United States (B. L. S. Bull. 638).

With the cooperation of various State authorities correlated studies of the money disbursements of wage earners and clerical workers have been made in the following cities under 50,000 population: (1) In New Hampshire—Berlin, Claremont, Concord, Conway, Dover, Keene, Laconia, Littleton, Nashua, Portsmouth; (2) in Michigan—Marquette; (3) in California—Modesto; (4) in Nevada—Reno.

Summaries of the data secured in these smaller cities have been published in the Monthly Labor Review for March 1936; June 1936; and September 1937.

Early in 1936 the Bureau of Labor Statistics undertook a study of consumer purchases which covers all income groups in 32 different cities. Funds were allotted to the project by the Works Progress Administration. At the same time a coordinated study was undertaken by the Bureau of Home Economics in 66 farm counties, in 140 villages, and in 19 small cities. Both of these investigations were made in cooperation with the National Resources Committee and the Central Statistical Board.

The cities covered in the coordinated studies of consumer purchases are as follows:

BUREAU OF LABOR STATISTICS

Aberdeen-Hoquiam, Wash.	Denver, Colo.	New York, N. Y.
Albany, Ga.	Dubuque, Iowa	Omaha, Nebr.—Council Bluffs, Iowa
Atlanta, Ga.	Everett, Wash.	Peru, Ind.
Beaver Falls, Pa.	Gastonia, N. C.	Portland, Oreg.
Bellingham, Wash.	Haverhill, Mass.	Providence, R. I.
Billings, Mont.	Logansport, Ind.	Pueblo, Colo.
Butte, Mont.	Mattoon, Ill.	Springfield, Ill.
Chicago, Ill.	Mobile, Ala.	Springfield, Mo.
Columbia, S. C.	Muncie, Ind.	Wallingford, Conn.
Columbus, Ohio.	New Britain, Conn.	Willimantic, Conn.
Connellsville, Pa.	New Castle, Pa.	

BUREAU OF HOME ECONOMICS

Astoria, Oreg.	Greenfield, Mass.	Moberly, Mo.
Beaver Dam, Wis.	Griffin, Ga.	New Philadelphia, Ohio
Boone, Iowa.	Klamath Falls, Oreg.	Olympia, Wash.
Columbia, Mo.	Lincoln, Ill.	Provo, Utah
Dodge City, Kans.	Logan, Utah	Sumter, S. C.
Eugene, Oreg.	Mount Vernon, Ohio	Westbrook, Maine
Greeley, Colo.		

Appendix C

Period Covered by the Study

Table B shows the time period to which the schedules collected in this region apply.

In Columbus and in Lansing, 93 percent of the data collected apply to the schedule year ending November 1934. In Detroit, 86 percent and in Grand Rapids, 89 percent of the data collected apply to the year ending February 1935. In Cincinnati 100 percent, in Cleveland 89 percent, in Indianapolis 100 percent, and in Milwaukee 94 percent of the data in the schedules collected pertain to the year ending February 1936.

TABLE B.—Period to which data in schedules for cities in the East North Central region apply

City, color of sample, and period to which data on schedules apply	Total	Sept. 1, 1933, to Aug. 31, 1934	Dec. 1, 1933, to Nov. 30, 1934	Mar. 1, 1934, to Feb. 28, 1935	June 1, 1934, to May 31, 1935	Mar. 1, 1935, to Feb. 29, 1936	June 1, 1935, to May 31, 1936
<i>Cincinnati (white families)</i>							
Schedule year.....	352					352	
Schedule quarter:							
Mar. 1, 1935, to May 31, 1935.	352					352	
June 1, 1935, to Aug. 31, 1935.	352					352	
Sept. 1, 1935, to Nov. 30, 1935.	352					352	
Dec. 1, 1935, to Feb. 29, 1936.	352					352	
<i>Cincinnati (Negro families)</i>							
Schedule year.....	100					100	
Schedule quarter:							
Mar. 1, 1935, to May 31, 1935.	100					100	
June 1, 1935, to Aug. 31, 1935.	100					100	
Sept. 1, 1935, to Nov. 30, 1935.	100					100	
Dec. 1, 1935, to Feb. 29, 1936.	100					100	
<i>Cleveland (white families)</i>							
Schedule year.....	490					214	276
Schedule quarter:							
Mar. 1, 1935, to May 31, 1935.	214					214	
June 1, 1935, to Aug. 31, 1935.	490					214	276
Sept. 1, 1935, to Nov. 30, 1935.	490					214	276
Dec. 1, 1935, to Feb. 29, 1936.	490					214	276
Mar. 1, 1936, to May 31, 1936.	276						276
<i>Columbus (white families)</i>							
Schedule year.....		37	229				
Schedule quarter:							
Sept. 1, 1933, to Nov. 30, 1933.	37	37					
Dec. 1, 1933, to Feb. 28, 1934.	266	37	229				
Mar. 1, 1934, to May 31, 1934.	266	37	229				
June 1, 1934, to Aug. 31, 1934.	266	37	229				
Sept. 1, 1934, to Nov. 30, 1934.	229		229				

TABLE B.—Period to which data in schedules for cities in the East North Central region apply—Continued

City, color of sample, and period to which data on schedules apply	Total	Sept. 1, 1933, to Aug. 31, 1934	Dec. 1, 1933, to Nov. 30, 1934	Mar. 1, 1934, to Feb. 28, 1935	June 1, 1934, to May 31, 1935	Mar. 1, 1935, to Feb. 29, 1936	June 1, 1935, to May 31, 1936
<i>Detroit (white families)</i>							
Schedule year.....	598		167	262	169		
Schedule quarter:							
Dec. 1, 1933, to Feb. 28, 1934.....	167		167				
Mar. 1, 1934, to May 31, 1934.....	429		167	262			
June 1, 1934, to Aug. 31, 1934.....	598		167	262	169		
Sept. 1, 1934, to Nov. 30, 1934.....	598		167	262	169		
Dec. 1, 1934, to Feb. 28, 1935.....	431			262	169		
Mar. 1, 1935, to May 31, 1935.....	169				169		
<i>Grand Rapids (white families)</i>							
Schedule year.....	194		83	111			
Schedule quarter:							
Dec. 1, 1933, to Feb. 28, 1934.....	83		83				
Mar. 1, 1934, to May 31, 1934.....	194		83	111			
June 1, 1934, to Aug. 31, 1934.....	194		83	111			
Sept. 1, 1934, to Nov. 30, 1934.....	194		83	111			
Dec. 1, 1934, to Feb. 28, 1935.....	111			111			
<i>Indianapolis (white families)</i>							
Schedule year.....	203					203	
Schedule quarter:							
Mar. 1, 1935, to May 31, 1935.....	203					203	
June 1, 1935, to Aug. 31, 1935.....	203					203	
Sept. 1, 1935, to Nov. 30, 1935.....	203					203	
Dec. 1, 1935, to Feb. 29, 1936.....	203					203	
<i>Indianapolis (Negro families)</i>							
Schedule year.....	101					101	
Schedule quarter:							
Mar. 1, 1935, to May 31, 1935.....	101					101	
June 1, 1935, to Aug. 31, 1935.....	101					101	
Sept. 1, 1935, to Nov. 30, 1935.....	101					101	
Dec. 1, 1935, to Feb. 29, 1936.....	101					101	
<i>Lansing (white families)</i>							
Schedule year.....	145		102	43			
Schedule quarter:							
Dec. 1, 1933, to Feb. 28, 1934.....	102		102				
Mar. 1, 1934, to May 31, 1934.....	145		102	43			
June 1, 1934, to Aug. 31, 1934.....	145		102	43			
Sept. 1, 1934, to Nov. 30, 1934.....	145		102	43			
Dec. 1, 1934, to Feb. 28, 1935.....	43			43			
<i>Milwaukee (white families)</i>							
Schedule year.....	446					333	113
Schedule quarter:							
Mar. 1, 1935, to May 31, 1935.....	333					333	
June 1, 1935, to Aug. 31, 1935.....	446					333	113
Sept. 1, 1935, to Nov. 30, 1935.....	446					333	113
Dec. 1, 1935, to Feb. 29, 1936.....	446					333	113
Mar. 1, 1936, to May 31, 1936.....	113						113

Appendix D

Selection of Families to be Interviewed

The method of choosing the sample.

The method to be used in choosing the sample to be included in a study of the families of employed wage earners and clerical workers presents a serious problem in the absence of a recent census giving for every family, at each address, the occupation of all the earners in the family, and the relief status of the family in the last year. Since no census data were available for use in this investigation, it was decided to use employers' current lists of employees as the basis for sampling in all the cities where the study was carried on. The methods used differed from city to city only insofar as the available data on the names and addresses of employers, and the number of their employees differed from city to city.

In order to provide for an adequate representation of establishments of all types the number of employees in an organization was taken into account in drawing the sample. Wherever possible a complete list of the employers within the city area with the number of their employees was secured, including industrial establishments, banks, insurance companies, wholesale and retail distributors, hotels and restaurants, transportation companies, public utilities, and Federal, State, county, and city Governments. The names of the employers with the numbers of their employees were arranged by industry, and the numbers of employees were added in such a way as to secure cumulative totals.

In cities where it was possible to obtain complete lists of employers, the grand total of employees was divided by the number of families planned for the survey in the given city, to obtain a sampling ratio. This ratio was applied to the cumulative totals of employees on the employer list (beginning with a number chosen at random) to secure a new list of employer names, selected at random, and the number of sample employee names to be drawn from the personnel lists of each selected employer. In cities where complete lists of employers were not available, separate sampling ratios were derived for each industrial or trade group, following the same procedure for each group as outlined above for the city as a whole. This procedure was adopted to prevent underrepresentation of a given industry or trade group due to the fact that its list of employers was incomplete, and permitted a reasonable distribution of the sample among the various lines of

business on the basis of 1930 census data adjusted to take account of known changes in business conditions since 1930.

Since the employer lists did not give the information necessary to determine whether employees were members of families, whether their families had been on relief during the past year, and what was the amount of the family income, at least five names listed directly after the name of the "sample employee" were drawn, to provide for substitutes in case the first employee whose name was drawn had no family or his family was not eligible for the sample. (See p. 402 for rules for determining eligibility.) If the name of the "sample" employee to be chosen from a given employer's list was drawn too near to the end of the list to secure the five or more substitute names in the usual way, the quota of substitutes was completed by taking the names at the beginning of the list of employees in the same establishment.

The necessity for having a file of substitute names made it seem advisable to limit the sampling to employers of five or more workers in the smaller cities and 10 or more in the larger cities, since the time and funds available for drawing the sample were limited, and visiting employers for the purpose of drawing sample names was a very time-consuming process.

The method of drawing sample employees was identical in each of the three Michigan cities, Detroit, Grand Rapids, and Lansing. In Detroit, which may serve to illustrate the procedure, a virtually complete list of the employers in the city was obtained from the Michigan State Department of Labor, which, when supplemented by and checked against the list of subscribers to the President's Reemployment Agreement in the summer of 1933 and data from the United States Bureau of Labor Statistics, assured comparable representation for each industrial group. The number of employers of 5 or more persons was found to be 5,000, and the number of their employees was 344,056. As it was desired to secure 600 schedules in Detroit, the sampling ratio was 1 to 573.

The employers were arranged alphabetically by kind of business, and the number of their employees cumulated. The first employer's name was chosen by adding down the cumulative total of employees to 220 (a number chosen at random from among the numbers 1 to 573). Thereafter, the other firms from whose personnel lists the sample employees were to be drawn were selected because they were the employers of workers number 793, 1,366, 1,939, and so on the cumulative list of employees.

The position of the first name to be drawn from the employee list of a selected firm was determined by the numbers picked in applying the sampling ratio. Thus if it chanced that employees 793 and 1,366 were employed by the same firm, and a total of 790 employees had

been employed by firms on the employer list ahead of this firm "X," employee 793 would be the third employee of firm "X" and employee 1,366 would be the 576 employee of firm "X."

For Columbus, the Workmen's Compensation Division of the Ohio State Department of Labor was able to furnish a complete list of employers. This list embraced 1,790 employers and 52,000 employees. With an original quota of schedules for Columbus of 300, the sampling ratio thus became 1 to 173.

In Cincinnati, Cleveland, Indianapolis, and Milwaukee, the four cities scheduled in 1936, it was felt that the employer lists derived from the best available sources did not give equally complete representation to each industrial and trade group. Accordingly, the employer list together with the cumulative number of employees was adjusted to 1930 census data with allowance for changes in employment in various lines of industry and trade since 1930, and separate sampling ratios computed for each industrial and trade group.

For Cincinnati and Cleveland, the employer lists were compiled from the records of the Ohio State Department of Labor and the United States Bureau of Labor Statistics. The total number of employees covered in the former city was 154,033, and 311,528 for the latter. For the Cincinnati sample, the ratios¹ ranged from 1 to 152 for the building trades to 1 to 434 for public service, while for Cleve-

¹ Separate sampling ratios were computed for each of the following groups in Cincinnati:

Industry	Sampling ratio	Percentage distribution of schedules
Building industry.....	1:152	5
Manufacturing:		
Chemical and allied industries.....	1:330	6
Clothing industry.....	1:330	6
Food and allied industries.....	1:358	7
Iron and steel industries.....	1:336	9
Printing, publishing, and engraving.....	1:301	5
Paper and allied industries.....	1:365	3
Electrical machinery and supply factories.....	1:279	3
Public utilities.....	1:335	2
Other manufacturing.....	1:393	11
Transportation and communication.....	1:326	10
Banking, brokerage, real estate, and insurance.....	1:424	3
Automobile agencies and filling stations.....	1:276	1
Wholesale trade.....	1:372	4
Retail trade.....	1:352	11
Public service.....	1:434	4
Recreation and amusement.....	1:399	4
Hotels, restaurants, and boarding houses.....	1:335	3
Laundries, cleaning and dyeing, etc.....	1:305	2
Other domestic and personal service (not in private home).....	1:338	1

land² the range was from 1 to 257 for the building trades to 1 to 731 for laundries, cleaning and dyeing establishments, etc.

In Indianapolis the list of employers was compiled from the following sources: National Recovery Administration files, the Community Fund, the Chamber of Commerce, the Better Business Bureau of Indianapolis, and the United States Bureau of Labor Statistics. The scheduled families were selected from the 73,779 employees covered by the combined list by sampling ratios³ ranging from 1 to 26 for the building trades to 1 to 352 for public service.

The list of employers for Milwaukee was obtained from data furnished by the Community fund, the Industrial Commission and the Association of Commerce of Milwaukee, and the United States Bureau

¹ Separate sampling ratios were computed for each of the following groups in Cleveland:

Industry	Sampling ratio	Percentage distribution of schedules
Building industry.....	1:257	6
Manufacturing:		
Blast furnaces and rolling mills.....	1:645	3
Other iron and steel.....	1:654	15
Chemical and allied industries.....	1:608	3
Rubber.....	1:587	(*)
Electrical machinery and supply factories.....	1:632	3
Clothing manufacturing.....	1:623	5
Automobile parts.....	1:644	8
Metal (nonferrous).....	1:656	2
Clay, glass, and stone.....	1:665	1
Printing, publishing, and engraving.....	1:632	3
Paper and allied industries.....	1:626	(*)
Lumber and furniture.....	1:584	1
Food and allied industries.....	1:643	4
Other manufacturing.....	1:649	3
Steam and street railroads.....	1:664	5
Telephone and telegraph.....	1:646	2
Other transportation and communication.....	1:717	1
Construction and maintenance of streets.....	1:592	1
Automobile repair, etc.....	1:638	1
Banking and brokerage.....	1:628	2
Insurance and real estate.....	1:602	3
Wholesale and retail trade.....	1:623	15
Other trade industries.....	1:571	1
Automobile agencies and filling stations.....	1:634	3
Public service.....	1:642	4
Hotels and restaurants.....	1:714	4
Laundries, cleaning and dyeing, etc.....	1:731	1
Recreation.....	1:634	1

* Less than 0.5 percent.

² Separate sampling ratios were computed for each of the following groups in Indianapolis:

Industry	Sampling ratio	Percentage distribution of schedules
Building industry.....	1:26	6
Manufacturing:		
Iron and steel industry.....	1:276	8
All other manufacturing.....	1:273	34
Transportation and communication.....	1:292	15
Banking, brokerage, real estate, and insurance.....	1:246	3
Wholesale and retail trade.....	1:260	18
Public service.....	1:352	4
Hotels and restaurants.....	1:200	7
Laundries, cleaning and dyeing, etc.....	1:240	2
Other domestic and personal services (not in private homes).....	1:18	3

of Labor Statistics. Twenty-two hundred employers and 163,847 employees were covered by the combined lists after duplications were eliminated. The sampling ratios⁴ ranged from 1 to 149 in the building trades to 1 to 648 for public service.

In Cincinnati and Indianapolis, where samples of Negro families as well as white were desired, the names of sample Negro employees drawn in the course of the regular procedure for the selection of sample were visited. Because of the relatively greater unemployment among Negro workers, it was necessary to take steps to obtain more Negro names than were yielded by the original sampling. At the time of visiting an employer for the purpose of drawing names, agents were instructed to inquire regarding the number of Negro employees. In addition to the names drawn by application of the sampling ratios described in the preceding pages, agents were instructed to draw additional Negro names as follows:

- Where 2 to 20 Negroes are employed, take names of all.
- Where 21 to 40 Negroes are employed, take 2 sample names with substitutes.
- Where 41 to 60 Negroes are employed, take 3 sample names with substitutes.
- Where 61 to 80 Negroes are employed, take 4 sample names with substitutes.
- Where 81 to 100 Negroes are employed, take 5 sample names with substitutes.
- Where over 100 Negroes are employed, note the fact and leave the way open for a future call at this establishment.

The first sample Negro name drawn from an employee list was selected on the basis of a number chosen at random, and the remaining sample names were taken at points on the list equidistant from the first sample name by a number determined by dividing the total number of Negro employees in the establishment by the number of sample names to be drawn.

⁴ Separate sampling ratios were computed for each of the following groups in Milwaukee:

Industry	Sampling ratio	Percentage distribution of schedules
Building industry.....	1:149	5
Manufacturing:		
Clothing and textile industries.....	1:485	5
Metal products and machinery (except electrical).....	1:370	25
Leather industries.....	1:427	5
Electrical machinery and supply factories.....	1:350	3
Food and allied industries.....	1:313	4
Other manufacturing.....	1:319	10
Transportation and communication.....	1:350	8
Wholesale and retail trade.....	1:386	18
Public service.....	1:648	7
Banking, brokerage, real estate, and insurance.....	1:389	4
Recreation and amusement.....	1:181	1
Hotels, restaurants, and boarding houses.....	1:245	2
Laundries, cleaning and pressing, etc.....	1:357	1
Other domestic and personal service (not in private homes.).....		2

When all of both white and Negro employees' names had been drawn, the excess number of white names were eliminated by lot, and additional visits were made to draw more names from employers of Negroes. The distribution of the Negro sample among the various business or industrial classifications was checked with informed local agencies to achieve correct distribution.

The same rules regarding the use of substitute names were followed for Negro families as for white families.

Rules for determining eligibility of families.

After the sample names had been drawn in the manner outlined above, field agents were sent to visit the families of all the employees whose names were the first drawn for each number ascertained by application of the sampling ratios. A schedule was obtained from that family if it was willing and able to furnish the information and met the requirements specified below. If the family failed to meet any of the following specifications, or was for some reason unwilling to give the information, the family of the employee whose name had occurred immediately next on the list of the same employer was visited. If the family of the second employee proved ineligible, the third was visited, and so on.

1. *Contact through chief earner.*—When families are selected by names of individuals from lists of employees, multiple-earner families would be overrepresented unless some measure was taken to prevent it. A family with three earners on the lists of employees would have approximately three chances³ to be drawn in the sample as against one chance for the family with one earner. Since families with several earners are more likely to have higher incomes and less likely to have young children than are families with only one earner, such overexposure would have impaired the representativeness of the sample.

In order to prevent such over representation in the cities studied in the East North Central region, two methods were employed, either of which reduced to equality the chance of each family to be included in the final sample. In Cincinnati, Cleveland, Indianapolis, and Milwaukee, schedules were secured only from families in which the name of the employee drawn from the lists of employees was the name of the chief earner in the family, i. e., member earning the largest amount of money during the year. If a visit to the family disclosed that a name of a member other than that of the chief earner had been drawn, the family was not scheduled. Since a family can have only one chief earner, this procedure effectively equalized the chances of inclusion in the sample for all families. By this method the number of families with more than one earner in the sample was kept to a number proportionate to the number of multiple-earner families in the

³ See appendix G, p. 439, footnote 8.

entire wage earner and lower-salaried clerical group. In Columbus, Detroit, Lansing, and Grand Rapids, the alternative procedure was used: a family was scheduled regardless of whether the name drawn from the employee list was that of the chief earner and an adjustment was made in the course of tabulation of the data to correct for this possible over representation.⁴

2. *Occupation of chief earner.*—In each family included in the survey, the chief earner is either a wage earner or a lower-salaried clerical worker. The classification of occupations according to economic groups presented by A. M. Edwards⁵ in an article based on census data was used in determining whether a person of given occupation should be considered a wage earner or a clerical worker. An exception was made in that the chief earner might not be a foreman, overseer, or domestic servant in private families, although these occupations are treated as wage earners in the Edwards classification. As the study progressed, the need for a more detailed classification of jobs became urgent. When the Works Progress Administration issued a manual, giving more detailed specifications adapted from definitions of the census of 1930, the new classifications⁶ were employed to assist in the problem of determining whether a specific type of work should properly be treated as part of the occupational group being covered by this investigation. The investigation included families of chief earners in the groups classified as office workers, salesmen, and kindred workers; skilled and semiskilled workers in building and construction; skilled and semiskilled workers in manufacturing and other industries; and unskilled laborers and domestic and personal service workers (except in private families). In a few instances where the chief earner was found to have pursued two occupations during the year prior to the visit of the field investigator, one an occupation classified as wage earner or clerical, and the other as a profession or as the proprietor of owned business, it was ruled that the family was to be included in the study unless the earnings from the profession exceeded the earnings from the wage-earner or clerical occupation, or unless the income from the owned business was more than one-half the earnings from the wage-earner or clerical occupation, or the expenses of the business could not be separated from the family expenses.

3. *Earnings of chief earner.*—No family in which the chief earner had not earned at least \$300 during the schedule year was included. The family of a chief earner classified as a clerical worker, who earned

⁴ See appendix G, pp. 438-445.

⁵ A Socio-Economic Grouping of the Gainful Workers in the United States. *Jour. of Amer. Statis. Assoc.*, 1933, vol. 28, pp. 377-387.

⁶ Works Progress Administration Circ. No. 2: Occupational classification and code, July 1935; and Works Progress Administration Circ. No. 2A: Index of occupations (alphabetical arrangement), occupational classification and code, September 1935.

\$2,000 or over during the schedule year, or \$200 or over during any one month, was excluded. No upper limit was placed on the earnings of wage earners, nor on total earnings of all members of the family combined, i. e., on family income as such.

4. *Occupation and income of subsidiary earners.*—No restriction was placed upon the occupation of subsidiary earners with one exception noted below. A family in which there was a subsidiary earner who was, for example, a professional worker or domestic servant in a private home was included provided the annual earnings of this worker were less than those of the chief earner. Families were excluded if a subsidiary earner was in business for himself and his business income and expenditure were so intermingled with the family's that it was impossible to separate them (as for example, a family where the wife carried on a small hair-dressing business in or adjacent to the family's living quarters and used for the business, gas and electricity recorded on the same meters as those recording the gas and electricity used for the operation of the household). Families in which a subsidiary earner was in business for himself were included if the business income and expenditure could be separated from that of the family and the net income from the owned business was less than half of the chief earner's earnings.

If a subsidiary earner was a clerical worker and earned over \$2,000 during the schedule year or over \$200 during any one month, the family was ineligible for inclusion in the sample.

5. *Employment minimum.*—In order to avoid the distortion of spending which results from prolonged unemployment and unanticipated curtailment of employment the Study was limited to employed wage earners and lower-salaried clerical workers. Figures as to the number of days of employment characteristic of wage earners and clerical workers not being available, it was necessary to set limits below which a worker could not be regarded as having been employed for the schedule year. Only those families were included in which one wage earner or lower-salaried clerical worker within the economic family had worked a minimum of 1,008 hours spread over a minimum of 36 weeks during the year. (This minimum was chosen to represent an average employment of $3\frac{1}{2}$ days of 8 hours in each of 36 weeks.) Families in which the chief earner was employed in distinctly seasonal industries as clothing manufacturing and building were scheduled if the chief earner had employment for as much as 28 hours in each of 30 weeks. These minima, however, are not to be regarded as criteria representing adequate employment.

6. *Definition of family.*—The Study was limited to private economic families of two or more persons sharing their incomes and living together, sharing the same table, eating not less than two meals a day prepared at home for at least 11 months. In addition families

whose situation during the year just previous to the visit of the Bureau's investigator was difficult or impossible to analyze on a statistical basis were excluded from the survey. Specific reasons for such exclusion were as follows:

(a) The homemaker worked away from home both day and night for more than 78 days in the year.

(b) Families boarding for more than 1 month.

(c) Presence of more than the equivalent of two boarders and/or lodgers, i. e., more than 104 boarder and/or lodger weeks (not including related persons giving complete records of their incomes and expenditures).

(d) Families having guests for more than the equivalent of 26 guest weeks.⁵

(e) Families having another family or two unrelated dependent persons over 21 years of age living with it and completely dependent on it (unless the dependents were parents of the homemaker, husband, or chief earner).

7. *Families not on relief.*—No families who received direct relief or work relief during the schedule year were included.

8. *Family income.*—(a) No family was included which had an annual family income less than \$500 during the schedule year.

(b) No upper limit was placed upon family income as such but no families were included who received more than one-fourth of their incomes from interest, dividends, royalties, speculative gains or rents (not including net receipts from boarders and lodgers).

(c) No family which received income from an owned business equal to more than half of the chief earner's earnings was scheduled.

(d) No family which received gifts or income in kind of a value equal to a fourth of its total money income was scheduled.

(e) No family which received rent in payment for services was scheduled.

(f) No family which received 3 months or more free rent was scheduled.

9. *Residence.*—Families must have resided in the area of the investigation for 9 months or more.

⁵ Guests were defined as persons not entirely dependent on the family funds who received board and lodging from the family without money payment but from whom it was impossible to secure data on income and expenditures.

Appendix E

Nativity of the Homemakers in Families Studied

In all of the cities covered by the present report in the East North Central region, data on the national background of the cooperating homemakers show a larger proportion of the native born than appears among married women 15 years of age and over as shown by the census of 1930. For each of the eight cities in this region the corresponding proportions are: Cincinnati, 93.8 and 89.2 percent; Cleveland, 68.0 and 56.5 percent; Columbus, 97.4 and 92.7 percent; Detroit, 72.1 and 61.3 percent; Grand Rapids, 89.7 and 76.4 percent; Indianapolis, 95.6 and 94.7 percent; Lansing, 93.8 and 88.7 percent; and Milwaukee, 74.8 and 73.1 percent.

There is a fairly close correspondence between the distribution of the foreign-born homemakers included in the survey by country of birth, and the similar distribution of homemakers 15 years of age and over shown by the census of 1930.

In four of the eight cities, the women from Germany predominate in the figures both for the city as a whole as shown by the census and among the foreign-born homemakers supplying data for the present investigation. In Detroit and Grand Rapids, Canadian families not of French extraction and Polish families, respectively, were the most frequently reported among those from foreign countries. Poland was in most cases the country of birth next most frequently reported in the other cities, with Italy, Russia, and the Balkan countries following. In Cleveland, the census of 1930 showed that women from Czechoslovakia came first among the foreign-born white married women 15 years of age and over, and women from Poland, Italy, Germany, and Russia next, in that order. In the Bureau of Labor Statistics' sample, those five countries provided the largest number of foreign homemakers, but order of the countries was as follows: Germany, Italy, Poland, Russia, and Czechoslovakia.

In part, the smaller proportion of the foreign born among the white homemakers covered by the present survey is due to the fact that the various causes restricting immigration in the period since 1914 have resulted in progressively reducing the proportion of foreign born in our entire population year by year. In addition, other studies have shown that the incomes of the foreign born are on the average lower than those of the native born, and that a larger proportion of

the foreign born have been on relief during the depression. Both of these situations are due to the relative difficulties of economic adjustment of immigrants, as compared with native-born families. These factors may have operated in placing a larger proportion of foreign-born than of native-born families below the lower limits of the group covered by the present study. (See pp. 402-405 for the limits set by the investigation.) Further, the fact that some of the homemakers in the foreign-born families speak English with difficulty may have operated in reducing the number of schedules successfully completed by families of the foreign born. In every city, however, in which there was a significant proportion of homemakers able to speak only a given language, field agents able to speak those languages were added to the staff. Occasionally husbands or neighbors or school children were called on to assist a foreign-born homemaker who spoke English with difficulty or not at all, but these cases were rare inasmuch as it was generally more satisfactory to send a foreign-speaking agent. In Columbus there was a field agent who spoke Italian and others who spoke one or two additional languages. In Cincinnati, Cleveland, Indianapolis, and Milwaukee, there were German-speaking field agents and others who spoke additional languages such as Italian, Polish, Slovak, and Croatian in Cleveland. In Detroit there was a Polish-speaking field agent, as well as others who spoke Italian, German, and other languages, and in the other Michigan cities also there were on the staff, agents speaking several of the more frequently encountered languages.

The homemakers in all the Negro families studied in Cincinnati and Indianapolis reported that they had been born in the United States

Appendix F

Field Procedure

Interview method of securing data.

The original data for this report came from families who estimated and calculated their various expenditures, with the help of special forms interpreted by trained field workers. The investigators were provided with a schedule which called for the entry of data on income and outgo in considerable detail, partly because the details themselves are of value and partly because it is easier for informants to remember the individual items of their family transactions than it is to provide the investigator with summary figures. This method was used rather than asking the families to keep records of disbursements at the time disbursements were made, because the procedure followed makes possible the inclusion of many families who would have been unwilling or unable to keep regular household accounts. (For facsimile of schedule used, see fig. B.)

No schedule was accepted for summarization in the present study unless the figures on total money receipts and total money disbursements agreed at least within 5 percent of the larger figure. It is not to be hoped that all the figures in each schedule were accurate to that extent, but there is no reason to suppose any persistent bias in the estimates has appeared in the course of the survey.

Figure B.—Schedule Facsimile

B. L. S. 907

U. S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, WASHINGTON

Agent _____

Schedule No. _____

Date _____

Information requested is confidential and giving it is voluntary. It will be seen only by sworn employees of the Federal Government

FAMILY DISBURSEMENTS OF WAGE EARNERS AND SALARIED WORKERS

State _____ City _____ Address _____ Nativity of homemaker _____ Color _____

Members of household	Sex	Age	School grade completed	Weeks in household	Year ending		Quarter ending—															
					Occupation	Industry	November 30			February 28			May 31			August 31						
							Time employed	Rate of pay	Earnings	Time employed	Rate of pay	Earnings	Time employed	Rate of pay	Earnings	Time employed	Rate of pay	Earnings				
a. Homemaker																						
b. Husband																						
c.																						
d.																						
e.																						
f.																						
g.																						
h.																						
i.																						
j.																						
k.																						

	Quarter ending—				Year ending			
	November 30	February 28	May 31	August 31				
FAMILY RECEIPTS						FAMILY DISBURSEMENTS		
I. Family earnings						I. Housing		
II. Rent from boarders and/or lodgers						II. Household operation		
III. Other rents (net)						III. Food		
IV. Interest and dividends						IV. Clothing		
V. Pensions and insurance annuities						V. Furnishings and equipment		
VI. Gifts						VI. Transportation		
VII. Other money income (specify)						VII. Recreation		
VIII.						VIII. Personal care		
IX.						IX. Medical care		
X. Total money income						X. Education		
XI. Net change assets and liabilities (p. 18)						XI. Community welfare		
XII. Total money receipts						XII. Vocation		
						XIII. Gifts and contributions		
Apparent excess of disbursements						XIV. Other family expenditures		
Apparent excess of receipts						XV. Total expenditures		
Percentage difference						XVI. Net change assets and liabilities (p. 18)		
						XVII. Total disbursements		

410 EAST NORTH CENTRAL REGION

HOUSING FACILITIES AND SERVICES		LANGUAGES SPOKEN			
		This family		Member's parent	Member's grand
1. Type: 1-family (a) detached (b) semidetached (c) row (d) 3-family (e) multiple		English			
2. Rarities: (a) yes (b) no		German			
3. Materials: (a) brick (b) frame (c) other (specify)		Italian			
4. Rooms:		Polish			
(a) Principal room		Yiddish			
(b) Kitchen, kitchenette		Other (specify)			
(c) Bath		FAMILY EXPENDITURES: 1. HOUSING			
(d) Recessed porch		Expenditures in current dollar			
5. Heat (a) yes (b) no		1. HEATED	November	February	May
6. Taxes (a) inside (b) outside (c) fixed (d) other (specify)		2. Monthly rental rate	August		
(e) ... min. use (a) yes (b) no		3. Rental proceeds			
7. Water (a) inside (b) outside (c) running		4. Total rent			
8. Heating of running water (a) yes (b) no		5. Repairs by tenant			
9. Heat (a) hot air (b) hot water or steam		6. TOTAL			
10. Light (a) electricity (b) gas (c) other (specify)		7. HOME OWNERS			
11. Kitchen stove		8. Annual rental value \$			
12. Kitchen fuel (a) electricity (b) gas (c) other (specify)		9. Total value \$			
13. Refrigerator (a) electric (b) gas (c) other (specify)		10. Paid on principal in current year \$			
14. Refrigerator (a) electric (b) gas (c) other (specify)		11. Improvements in year \$			
15. Bathing (a) electric (b) gas (c) other (specify)		12. Taxes			
16. Bathing (a) electric (b) gas (c) other (specify)		13. Assessments			
17. Bathing (a) electric (b) gas (c) other (specify)		14. Repairs and replacements			
18. Bathing (a) electric (b) gas (c) other (specify)		15. Fire insurance on home			
19. Bathing (a) electric (b) gas (c) other (specify)		16. Interest on mortgage			
20. Monthly rental rate for this dwelling \$		17. Refinancing charges			
		18. TOTAL			
		19. Rent at school			
		20. Rent on vacation or trips			
		21. TOTAL housing			

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II. HOUSEHOLD OPERATION

II (a). FUEL AND LIGHT	Quarter ending—								
	November 30		February 28		May 31		August 31		
	Quantity	Expenditures	Quantity	Expenditures	Quantity	Expenditures	Quantity	Expenditures	
1. Coal: Anthracite.....									
2. Bituminous.....									
3. Coke.....									
4. Briquettes.....									
5. Wood.....									
6. Fuel oil.....									
7. Gas.....	X X X X		X X X X		X X X X		X X X X		
8. Kerosene.....									
9. Gasoline (except for auto).....									
10. Electricity: Domestic lighting and appliances.....	X X X X		X X X X		X X X X		X X X X		
11. Refrigeration.....	X X X X		X X X X		X X X X		X X X X		
12. TOTAL fuel and light.....									
II (b). OTHER HOUSEHOLD OPERATION	Expenditures for quarter ending—				II (c). OTHER HOUSEHOLD OPERATION—Continued	Expenditures for quarter ending—			
	November 30	February 28	May 31	August 31		November 30	February 28	May 31	August 31
13. Water rent.....					25. Laundry out: Wet wash.....				
14. Ice.....					rough dry.....				
15. Telephone.....					ranged.....				
16. Domestic service: Full time.....					ironed.....				
17. Part time.....					26. Stationery, pens, pencils, ink.....				
18. Household paper.....					27. Postage, telegrams.....				
19. Soap (except toilet): Bar.....					28. Moving, express, freight, drayage.....				
20. Flakes and powder.....					29. Safe deposit box.....				
21. Starch, bluing (laundry).....					30. Insurance on furniture.....				
22. Cleaning powders, polishes.....					31. Interest on debts (not on home).....				
23. Steel wool, etc.....					32. Other (specify).....				
24. Matches.....					33. TOTAL II(b).....				
					34. TOTAL household operation.....				

III 4. FOOD PURCHASED AND CONSUMED LAST 7 DAYS

ITEMS	Unit	Purchased		ITEMS	Unit	Purchased	
		Quantity consumed per week	Cost per unit			Quantity consumed per week	Cost per unit
1. BEEF: Fresh, steak, porterhouse, tri-tip				31. POULTRY (cont'd): Chicken, stew			
2. top round				32. Turkey			
3. other				33. Other			
4. roast, rib				MISCELLANEOUS MEAT PRODUCTS			
5. chuck				34. Bologna, frankfurters, etc.			
6. other				35. Cooked: Ham			
7. boiling, chuck				36. Tongue			
8. plate				37. Liver			
9. other				38. Other			
10. Canned				39. FISH: Fresh			
11. Corned				40. Canned			
12. Dried				41. Cured			
13. VEAL: Fresh, steak, chops				42. Oysters			
14. roast				43. Other sea food			
15. stew				44. EGGS			
16. LAMB: Fresh, chops				45. MILK: Fresh whole-bottled			
17. roast				46. loose			
18. stew				47. skinned			
19. PORK: Fresh, chops				48. Skinned dried			
20. Jota roast				49. Canned			
21. other				50. Other			
22. Smoked, bacon				51. CHEESE: American			
23. ham, slices				52. Cottage			
24. half or whole				53. Other			
25. picnic				54. Ice cream			
26. Salt, etc.				55. Butter			
27. Pork sausage				56. Cream			
28. Other pork				57. Other table fats			
29. POULTRY: Chicken, broiling				58. Table or cooking oils			
30. Total							

(4)

14-5000

III (A). FOOD PURCHASED AND CONSUMED LAST 7 DAYS—Continued

ITEMS	Purchased			Consumed		
	Units	Quantity	Unit price	Quantity	Unit price	Expense
59. Lard.....						
60. Vegetable shortening.....						
61. Mayonnaise and other salad dressing.....						
GRAIN PRODUCTS						
62. Bread: White.....						
63. Graham, whole wheat.....						
64. Rye.....						
65. Crackers.....						
66. Flakn rolls.....						
67. Other baked goods (bread rolls, purchased).....						
68. Cookies.....						
69. Cakes.....						
70. Pies.....						
71. Other.....						
72. Flour: White.....						
73. Graham.....						
74. Other.....						
75. Corn meal.....						
76. Hominy.....						
77. Cornstarch.....						
78. Rice.....						
79. Rolled oats.....						
80. Wheat cereal.....						
81. Ready-to-eat breakfast foods.....						
82. Tapioca.....						
83. Rye.....						
84. Macaroni, spaghetti, noodles.....						
85. SWEETS: Sugar, white.....						
86. brown.....						
87. Candy.....						
88. SWEETS (cont'd): Jelly.....						
89. Molasses, syrup.....						
VEGETABLES						
90. Potatoes.....						
91. Sweetpotatoes, yam.....						
92. Tomatoes: Fresh.....						
93. Canned.....						
94. Julon.....						
95. Beans, pinto.....						
96. Beans, sprouts.....						
97. Cabbage.....						
98. Sauerkraut.....						
99. Collards.....						
100. Kale.....						
101. Lettuce.....						
102. Spinach: Fresh.....						
103. Canned.....						
104. Other leafy vegetables.....						
105. Asparagus: Fresh.....						
106. Canned.....						
107. Lima beans: Fresh.....						
108. Canned.....						
109. Beans, snap (string): Fresh.....						
110. Canned.....						
111. Broccoli.....						
112. Peas: Fresh.....						
113. Canned.....						
114. Beans: Fresh.....						
115. Canned.....						
116. Peppers.....						

III (A). FOOD PURCHASED AND CONSUMED LAST 7 DAYS—Continued

ITEMS	Purchased		Purchased		ITEMS	Purchased		Purchased
	Unit	Quantity used week	Unit	Quantity used week		Unit	Quantity used week	
117. Onions					145. Apples: Fresh			
118. Carrots					146. Canned			
119. Yellow turnips, rutabaga					147. Apricots: Fresh			
120. Squash, winter, pumpkin					148. Canned			
121. Cauliflower					149. Beans: Bush			
122. Celery					150. Beans: Fresh			
123. Corn: On ear					151. Canned			
124. Canned					152. Cherries: Fresh			
125. Dried					153. Canned			
126. Cucumbers					154. Grapes: Fresh			
127. Eggplant					155. Canned			
128. Onions: Mature					156. Peaches: Fresh			
129. Spring					157. Canned			
130. Parsnips					158. Peas: Fresh			
131. Squash, summer					159. Canned			
132. White turnips					160. Pineapple: Fresh			
133. Other vegetable					161. Canned			
VEGETABLES, DRIED, AND NUTS					162. Melons			
134. Beans: Dry					163. Figs: Fresh			
135. Canned, dried					164. Canned			
136. Peas: Black eyed					165. Other fruit			
137. Other					166. Cider			
138. Nuts: Shelled					167. Grape juice			
139. In shell					168. Other fruit juices			
140. Peanut butter					FRUIT, DRIED			
FRUIT, FRUIT JUICES					169. Apples			
141. Lemons					170. Peaches			
142. Oranges					171. Prunes			
143. Grapefruit: Fresh					172. Raisins			
144. Canned					173. Dates			

III (A). FOOD PURCHASED AND CONSUMED LAST 7 DAYS—Continued

ITEM	Unit	Quantity used last 7 days	Purchase		ITEM	Unit	Quantity used last 7 days	Purchase	
			Quantity	Unit price				Quantity	Unit price
174. Figs					202. Board at school				
175. Other					203. Candy, ice cream, drinks, etc.				
MISCELLANEOUS ITEMS					TOTAL FOOD EXPENDITURE				
176. Gelatin					204. Total food expenditure				
177. Packaged dessert mixtures					NUMBER MEALS LAST 7 DAYS FURNISHED FROM FAMILY FUND				
178. Tea					Breakfast				
179. Coffee					Even	Home	Away	Home	Dinner
180. Cocoa					See	At	Home	Away	Home
181. Chocolate					a.				
182. Vinegar					b.				
183. Salt					c.				
184. Baking powder, yeast, soda					d.				
185. Spices, extracts					e.				
186. Catsup, sauce					f.				
187. Pickles, olives					g.				
188. Soup; Tomato					h.				
189. Other (specify)					i.				
190. Cod-liver oil					j.				
191. Proprietary foods					HOME-PRODUCED FOOD AND GIFTS OF FOOD USED LAST 7 DAYS				
192. Other foods					ITEM				
193. Soft drinks consumed at home					Quantity				
194. Other drinks consumed at home					Value				
195. Total food consumed at home					1.				
196. Lunches at work					2.				
197. Lunches at school					3.				
198. Other meals, not venison; Breakfast					4.				
199. Lunch					FACTORS AFFECTING FOOD HABITS (SPECIFY)				
200. Dinner					Religious				
201. Meals on week-ends					National or racial				
					Health				
					Other				

FIELD PROCEDURE

III (2). FOOD—ANNUAL EXPENDITURE

Expenditure for quarter ending—

ITEMS	November 29			February 28			May 31			August 31		
	Week	Month	Quarter	Week	Month	Quarter	Week	Month	Quarter	Week	Month	Quarter
	FOOD EATEN AT HOME											
1. "Groceries" (including items of household operations, tobacco, etc.)												
2. Additional expenditures: Baked goods												
3. Meat and fish												
4. Eggs												
5. Milk and cream												
6. Vegetables												
7. Fruit												
8. Candy												
FOOD BOUGHT AND EATEN AWAY FROM HOME												
9. Lunches at work												
10. Lunches at school												
11. Other meals not vacation: Breakfast												
12. Lunch												
13. Dinner												
14. Meals on vacation												
15. Board at school												
16. Candy, ice cream, drinks, etc.												
Y. Total food												

FOOD GROUP	Other (quantity)				Milk dairy (quantity)	Other dairy (quantity)	FUEL	Quantity	Value
	Cereals		Other (quantity)						
	Oats Oats and barley	Independents Custard sauce	Independents Custard sauce	Other (quantity)					
18. Meat					X X				
19. Groceries					X X				
20. MILK					X X				
21. Baked goods					X X				
22. Fruits, vegetables					X X				

(8)

IV (A). CLOTHING—MEN AND BOYS

ITEM	Member..... Age.....				Member..... Age.....				ITEM	Member..... Age.....				Member..... Age.....			
	Weeks.....				Weeks.....					Weeks.....				Weeks.....			
	Num-ber	Price	Expend-iture	Quar-ter purchased	Num-ber	Price	Expend-iture	Quar-ter purchased		Num-ber	Price	Expend-iture	Quar-ter purchased	Num-ber	Price	Expend-iture	Quar-ter purchased
1. Hats: Felt.....									UNDERWEAR 28. Cotton: Knit suits..... 29. Woven suits..... 30. Under shirts..... 31. Shorts..... 32. Suits..... 33. Cotton and wool Shirts..... 34. Drawers..... 35. Rayon and/or silk Suits..... 36. Shirts..... 37. Drawers..... 38. Pajamas and nightshirts..... 39. Shoes: Street..... 40. Street..... 41. Work..... 42. Work..... 43. Canvas..... 44. Other..... 45. Boots: Rubber..... 46. Leather..... 47. Aroties..... 48. Rubbers..... 49. Shoe repairs..... 50. Shoe shines..... 51. Hosi: Heavy cotton..... 52. Cotton, dress..... 53. Rayon..... 54. Silk..... 55. Wool.....								
2. Straw.....																	
3. Caps: Wool.....																	
4. Other.....																	
5. Overcoats.....																	
6. Topcoats.....																	
7. Raincoats.....																	
8. Jackets: Heavy fabric.....																	
9. Leather.....																	
10. Other.....																	
11. Sweaters: Heavy.....																	
12. Light.....																	
13. Flay suits: Wool knit.....																	
14. Cotton sueds.....																	
15. Other.....																	
16. Suits: Heavy wool.....																	
17. Light-weight wool.....																	
18. Cotton, linen.....																	
19. Palm Beach.....																	
20. Other.....																	
21. Trousers: Wool.....																	
22. Cotton.....																	
23. Other.....																	
24. Overalls, coveralls.....																	
25. Shirts and blouses (Cotton, work.....																	
26. Cotton, dress.....																	
27. Wool.....																	

EAST NORTH CENTRAL REGION

IV (A). CLOTHING—MEN AND BOYS—Continued

ITEM	Member Age				Member Age			
	Weeks				Weeks			
	Num-ber	Price	Expend-iture	Quar-ter pur-chased	Num-ber	Price	Expend-iture	Quar-ter pur-chased
56. Gloves: Cotton, work.....								
57. Other, work.....								
58. Leather street.....								
59. Other, street.....								
60. Ties.....								
61. Collars.....								
62. Bathing suits, sun suits.....								
63. Handkerchiefs.....								
64. Accessories.....								
65. Bathrobes.....								
66. Cleaning, repairing.....								
67. Other (specify).....								
68. Total.....								

IV (B). CLOTHING—WOMEN AND GIRLS

ITEM	Member Age				Member Age			
	Weeks				Weeks			
	Num-ber	Price	Expend-iture	Quar-ter pur-chased	Num-ber	Price	Expend-iture	Quar-ter pur-chased
1. Hats: Felt.....								
2. Straw.....								
3. Fabric.....								
4. Caps and berets: Wool.....								
5. Other.....								

IV (B). CLOTHING—WOMEN AND GIRLS—Continued

ITEM	Member Age				Member Age			
	Weeks				Weeks			
	Num-ber	Price	Expend-iture	Quar-ter pur-chased	Num-ber	Price	Expend-iture	Quar-ter pur-chased
6. Coats: Heavy, plain.....								
7. Heavy, fur trimmed.....								
8. Fur.....								
9. Light, wool.....								
10. Light, cotton.....								
11. Light, silk, rayon.....								
12. Play suits: Wool knit.....								
13. Cotton suade.....								
14. Other.....								
15. Raincoats.....								
16. Wool knit.....								
17. Sweaters and jackets: Wool fabric.....								
18. Leather, leatherette.....								
19. Other.....								
20. Suits: Wool.....								
21. Silk, rayon.....								
22. Other.....								
23. Silk, rayon.....								
24. Waists and middos: Cotton.....								
25. Other.....								
26. Skirts: Wool.....								
27. Other.....								
28. Dresses: Cotton, house.....								
29. Cotton, house.....								
30. Cotton, street.....								

FIELD PROCEDURE

IV (B). CLOTHING—WOMEN AND GIRLS—Continued

ITEM	Member Age				Member Age				ITEM	Member Age				Member Age			
	Weeks				Weeks					Weeks				Weeks			
	Num-ber	Price	Expend-iture	Quar-ter pur-chased	Num-ber	Price	Expend-iture	Quar-ter pur-chased		Num-ber	Price	Expend-iture	Quar-ter pur-chased	Num-ber	Price	Expend-iture	Quar-ter pur-chased
31. Dresses: Cotton, street.....									56. (Cotton.....								
32. Silk, rayon.....									57. Pajamas, loung- ing and beach.....								
33. Silk, rayon.....									58. (Other.....								
34. Wool.....									59. Bathrobes.....								
35. Wool.....									60. Kimonos, negligees.....								
36. Other.....									61. Hose: Silk.....								
37. Other.....									62. Silk.....								
38. Aprons.....									63. Silk.....								
39. Coveralls.....									64. Rayon.....								
40. Knickers, breeches, shorts.....									65. Cotton.....								
41. Slips: Cotton.....									66. Wool.....								
42. Silk.....									67. Shoes: Street.....								
43. Rayon.....									68. Street.....								
44. Corsets, girdles.....									69. Dress.....								
45. Brasieres.....									70. Dress.....								
46. } (Cotton.....									71. Sport.....								
47. } Union suits and combinations. Wool.....									72. Sport.....								
48. } (Silk, rayon.....									73. House slippers.....								
49. Underwaists, shirts.....									74. Shoe repairs.....								
50. } (Cotton.....									75. Shoe shines.....								
51. } Bloomers and pan- ties. Rayon.....									76. Rubbers.....								
52. } (Silk.....									77. Arctics, gaiters.....								
53. } Nightgowns (Cotton, light.....									78. Gloves: Cotton.....								
54. } and sleep- (Cotton, flannel.....									79. Leather.....								
55. } ing paj- (Silk, rayon.....									80. Other.....								
									81. Bathing suits, sun suits.....								
									82. Handkerchiefs.....								
									83. Fur.....								

IV (B). CLOTHING—WOMEN AND GIRLS—Continued

ITEM	Member Age				Member Age			
	Weeks				Weeks			
	Num-ber	Price	Ex-pen-diture	Quan-tity pur-chased	Num-ber	Price	Ex-pen-diture	Quan-tity pur-chased
84. Mufflers, scarfs.....								
85. Handbags, purses.....								
86. Umbrellas.....								
87. Garters, belts, hairpins, etc.....								
88. Cleaning, repairing.....								
89. Other (specify).....								
90. TOTAL.....								

IV (C). INFANTS' CLOTHING

ITEM	Member Age				Member Age			
	Weeks				Weeks			
	Num-ber	Price	Ex-pen-diture	Quan-tity pur-chased	Num-ber	Price	Ex-pen-diture	Quan-tity pur-chased
1. Caps, hoods, bunnets.....								
2. Coats.....								
3. Sweaters, anoraks.....								
4. Sweater suits.....								
5. Dresses, rompers.....								
6. Skirts, garterless.....								
7. Shirts, bands.....								
8. Diapers.....								
9. Sleeping garments.....								
10. Stockings.....								
11. Booties, slippers.....								
12. Other (specify).....								
13. TOTAL.....								

(12)

IV (D). YARD GOODS AND FINDINGS

ITEM	Yards	Price	Expenditure	Quar-ter purchased
1. Cotton.....				
2. Linen.....				
3. Rayon.....				
4. Silk.....				
5. Wool.....				
6. Mixture.....				
7. Other.....				
8. Findings.....				
9. TOTAL.....				

IV (E). PAID HELP FOR SEWING

ITEM	Expenditure	Quar-ter purchased
1.		
2.		
3.		

GIFTS OF CLOTHING

ITEM	Quantity	Value
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

14-5085

PURCHASING PROCEDURES IN SCHEDULE YEAR

CLOTHES	Type of outlet				Situation of store			Payment			Price	
	Department	Specialized shop	Mail-order	\$ cents to \$1	Neighborhood	Central	Nearby city	Cash	Charge account	Installment	Regular	Sale
Men's:												
1. Coats.....												
2. Hats.....												
3. Shoes.....												
4. Suits.....												
5. Underwear.....												
Women's:												
6. Coats.....												
7. Hats.....												
8. Shoes.....												
9. Dresses.....												
10. Underwear.....												
Children's:												
11. Outerwear.....												
12. Underwear.....												
FURNISHINGS AND EQUIPMENT	Department	Specialized shop	Mail-order	Other (specify)	Neighborhood	Central	Nearby city	Cash	Charge account	Installment	Regular	Sale
1. FURNITURE: Suits.....												
2. Major pieces.....												
3. Kitchens.....												
4. Small pieces.....												
5. Mechanical refrigerators.....												
6. Vacuum cleaners.....												
7. Electric washers.....												
8. Other electrical equipment.....												
9. Sheets and pillowcases.....												
10. Other household textiles.....												

V. FURNISHINGS AND EQUIPMENT

ITEM	Number	Price	Expendi- ture	Quarte r purchas ed	ITEM	Number	Price	Expendi- ture	Quarte r purchas ed
FURNITURE					28. Blankets.....				
1. Suites: Living room.....					29. Comforts, quilts.....				
2. Bedroom.....					30. Shaves.....				
3. Dining room.....					21. Pillowcases.....				
4. Beds: Wood.....					32. Bedspreads, couch covers.....				
5. Metal.....					23. Tablecloths, napkins, dollies: Cotton.....				
6. Cots, cribs: Wood.....					34. Linen.....				
7. Metal.....					25. Towels: Linen.....				
8. Bedsprings.....					26. Cotton, Turkish.....				
9. Daysofports.....					37. Other, cotton.....				
10. Couches, daybeds.....					38. Table runners, dresser scarfs.....				
11. Dressers.....					39. Curtains, draperies.....				
12. Chiffoniers, chests.....					40. Dishcloths, cleaning cloths, etc.....				
13. Sideboards, buffets.....					41. Other (specify).....				
14. Desks.....					SILVERWARE, CHINA, AND GLASSWARE				
15. Bookcases, bookshelves.....					42. China or porcelain, table.....				
16. Tables, except kitchen.....					43. Glassware.....				
17. Chairs: Wood.....					44. Tableware: Silver.....				
18. Upholstered.....					45. Other (specify).....				
19. Benches, stools, footstools.....					46. Other.....				
20. Tea carts, wheel trays.....					ELECTRICAL EQUIPMENT				
21. Stands, racks, costumes.....					47. Vacuum cleaners.....				
22. Other.....					48. Refrigerators (electric).....				
TEXTILE FURNISHINGS					49. Electric stoves, hot plates.....				
23. Carpets, rugs (sq. yds.).....					50. Washing machines.....				
24. Linoleum, inlaid (sq. yds.).....					51. Irons.....				
25. Felc-base floor covering (sq. yds.).....					52. Ironers, mangles.....				
26. Mattresses.....					53. Heaters, fans.....				
27. Pillows.....					54. Light bulbs.....				

V. FURNISHINGS AND EQUIPMENT—Continued

ITEM	Number	Price	Expenditure	Quarter purchased	ITEM	Number	Price	Expenditure	Quarter purchased
55. Lamps.....					67. Pots, pans, cutlery.....				
56. Toasters.....					68. Tubs, boards, wringers.....				
57. Sewing machines (electric).....					69. Ironing boards, racks, baskets.....				
58. Other (specify).....					70. Sewing machines (not electric).....				
MISCELLANEOUS EQUIPMENT					71. Baby carriages, go-carts.....				
59. Mirrors, pictures, clocks, ornaments.....					72. Trunks, hand baggage.....				
60. Carpet sweepers.....					73. Household tools, ladders, cans.....				
61. Brooms, brushes, mops.....					74. Window shades, wire screens, awnings.....				
62. Dustpans, pails, etc.....					75. Lawn mowers, garden equipment.....				
63. Gas refrigerators.....					76. Repairs, cleaning.....				
64. Iceboxes.....					77. Other (specify).....				
65. Stoves and ranges (not electric).....					78. Total furnishings and equipment.....				
66. Canning equipment, cookers.....									

FURNISHINGS AND EQUIPMENT RECEIVED FREE

ITEM	Quantity	Value	ITEM	Quantity	Value
1.			11.		
2.			12.		
3.			13.		
4.			14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

VI. TRANSPORTATION					VII. RECREATION				
ITEM	Expenditure for quarter ending—				ITEM	Expenditure for quarter ending—			
	November 29	February 29	May 31	August 31		November 29	February 29	May 31	August 31
1. Auto..... motorcycle..... Mlayole.....					1. Newspapers: Street.....				
2. Auto, make..... year.....					2. Home delivery.....				
N..... S..... year bought.....					3. Magazines (specify).....				
price \$.....					4.....				
3. Gas: Regular.....					5.....				
4. Ethyl.....					6. Books (except school).....				
5. Oil.....					7. Loan library.....				
6. Tires..... number.....					8. Associations (recreation).....				
7. Tubes..... number.....					9. Entertaining: In home (except food).....				
8. Repairs and maintenance (specify).....					10. Out of home.....				
.....					11. Movies: Adult, usual price.....				
9. Garage rent, parking.....					12. Child, usual price.....				
10. License.....					13. Plays, concerts.....				
11. Taxes.....					14. Spectator sports.....				
12. Insurance: Fire.....					15. Other amusements.....				
13. Theft.....					16. Radio: Price..... N..... S.....				
14. Public liability.....					17. Upkeep.....				
15. Property damage.....					18. Musical instruments.....				
16. Collision.....					19. Sheet music, records, rolls.....				
17. Fines or damages.....					20. Athletic equipment, supplies, etc.....				
18. Rent of auto or motorcycle.....					21. Children's play equipment.....				
19. Railroad.....					22. Camera, films, and photo equipment.....				
20. Boat.....					23. Pets (purchase and upkeep).....				
21. Air.....					24. Cigarettes.....				
22. Bus: Interurban.....					25. Cigars.....				
23. Local.....					26. Pipe tobacco.....				
24. Trolley.....					27. Other tobacco.....				
25. Taxi.....					28. Other recreation (specify).....				
26. Other (specify).....					29. Total recreation.....				
27. Total transportation.....									

VIII. PERSONAL CARE								IX. FORMAL EDUCATION				
ITEM	Usual price			Expenditure quarter ending—				ITEM	Expenditure quarter ending—			
	Men	Women	Child- ren	November 21	February 28	May 31	August 31		November 21	February 28	May 31	August 31
1. Hair cuts.....								1. Away: Tuition, fees, books, supplies.....				
2. Shaves.....								2. Home: Tuition, music, dance, books, supplies, other (specify).....				
3. Shampoos.....								3. Total education.....				
4. Manicures.....								XI. COMMUNITY WELFARE				
5. Permanent waves.....								1. Church and Sunday School.....				
6. Other waves.....								2. Community chest, other organizations.....				
7. Other service.....								3. Taxes: Poll, income, personal property.....				
8. Toilet soap.....								4. Total community welfare.....				
9. Tooth paste, mouth washes.....								XII. VOCATION				
10. Brushes (hair, tooth), toilet articles, etc.....								1. Union dues or fees.....				
11. Cosmetics and toilet preparations.....								2. Professional association dues or fees.....				
12. Total personal care.....								3. Technical literature.....				
IX. MEDICAL CARE								4. Other (specify).....				
1. Medicine and drugs.....								5. Total vocation.....				
2. Eyeglasses.....								XIII. GIFTS AND CONTRIBUTIONS				
3. Hot-water bottles, crutches, etc.....								1. Christmas, birthday, etc.....				
4. G. P. home visits at \$.....								2. Contributions, support relatives.....				
5. G. P. office visits at \$.....								3. Contributions, support other persons.....				
6. Clinic visits..... at \$.....								4. Total gifts and contributions.....				
7. Dental service.....								XIV. OTHER FAMILY EXPENDITURES				
8. Specialists (specify kind).....								1. (Funerals, legal, losses, gardens, etc.).....				
9. Nursing service in home: Prv. via.....								2.....				
10. Hospital room..... days at \$.....								3.....				
11. ward..... days at \$.....								4.....				
12. nurse..... days at \$.....								5. Total other family expenditures.....				
13. Accident and health insurance.....												
14. Other (specify).....												
15. Total medical care.....												

CHANGES IN THE FORM AND AMOUNT OF FAMILY ASSETS AND LIABILITIES IN THE YEAR TO

(Not including changes due to appreciation or depreciation of property which has not changed hands)

Funds made available for family use from sources other than family income in schedule year	Amount	Disposition of money received during the schedule year not used for current family expenditure	Amount
Reduction in cash: On hand.....		Increase in cash: On hand.....	
In checking account.....		In checking accounts.....	
In savings account.....		In savings account.....	
Surrender of insurance policy.....		Investment: Improvements on own home.....	
Settlement of life insurance and/or endowment policies.....		Building and loan shares.....	
Sale: Building and loan shares.....		Real estate (not own home).....	
Real estate.....		Stocks and bonds.....	
Stocks and bonds.....		Other (specify).....	
Goods and chattels.....		Increase in money lent.....	
Other property (specify).....		Increase in rents and other debts due family.....	
Receipts from loans outstanding.....		Decrease in debt in the form of:	
Increase in debt in the form of:		Mortgages (own home).....	
Mortgages (own home).....		Mortgages (other).....	
Mortgages (other).....		Other amounts due: Banks.....	
Other amounts due: Banks.....		Insurance companies.....	
Insurance companies.....		Small-loan companies.....	
Small-loan companies.....		Firms selling on installment plan.....	
Firms selling on installment plan.....		Automobiles.....	
Automobiles.....		Other goods.....	
Other goods.....		Individuals.....	
Individuals.....		Other debts (specify).....	
Other debts (specify).....		Payments on life insurance (premiums).....	
.....		<i>(Indicate frequency of premium payments)</i>	
.....		Payments on annuities (premiums).....	
.....		
TOTAL.....		TOTAL.....	
Net change.....		Net change.....	

If net change is minus, enter on left side of face sheet (Item No. XI, page 1).
If net change is plus, enter on right side of face sheet (Item No. XVI, page 1).

FIELD PROCEDURE

OFFICE RECORD

428

EAST NORTH CENTRAL REGION

Edited by

Schedule No.

Arithmetic checked by

City

Reviewed by

City size

TABULATED	
Group	Name

State

Region

Income group

Color

Family Composition

TABULATION CHECKED	
Group	Name

Check-interviewing.

At the beginning of the field work one out of every five schedules submitted by each agent was checked by one of the supervisors in an interview with the family having originally provided the schedule data. The Washington office provided the field office with specific instructions concerning the methods of handling the check-interviews. The schedules to be checked were chosen at random. The name of the agent making the first call was not known to the check-interviewer, thus eliminating any possible personal bias. In returning to the family for a check-interview, the investigator provided the informant, usually the homemaker, with a brief summary of the family expenditures and the balance of receipts and disbursements, checked it with her, and checked also the details of some section of the schedule, selected at random.

Later in the course of the field work, when the check-interviews disclosed that certain agents were having difficulty in obtaining accurate information, a larger proportion of the schedules collected by these particular agents was checked. When the check showed that the work of certain agents was very accurate, only 1 out of 10 schedules was verified by a return interview. As the work progressed, relief workers whose schedules had proven wholly reliable were advanced to the position of check-interviewers.

Food check lists for 1 week.

Previous experience in collecting statistics on the details of annual food expenditures has shown the difficulty of securing reliable estimates of the year's purchases. The schedule for this investigation was, therefore, prepared with two sections dealing with food expenditures. The first was in effect a check list providing in detail for the entry of the quantities of foods purchased and used, and expenditures for foods in the week immediately preceding the interview. The second section was prepared to contain a summary of food expenditures during the year. The section for entry of foods during 1 week (which listed over 194 foods) served two purposes. It secured from each family detailed estimates of food purchases with as high a degree of accuracy as is possible unless supervised records of purchases are obtained, and it served to remind the homemaker of her customary expenditures, thus making it easier to estimate the family's total outlay for food in the four quarters of the year covered by the schedule.

Weekly records of food consumption.

In order to obtain as much information as possible on seasonal differences in food purchases and food consumption, each family interviewed was asked in addition to keep a record of food purchases and food consumption for 1 week in at least two, and preferably four,

different quarters. The following numbers of weekly food records were obtained in the respective cities:

Cincinnati.....	48
Cleveland.....	0
Columbus.....	362
Detroit.....	109
Grand Rapids.....	16
Indianapolis.....	283
Lansing.....	16
Milwaukee.....	114

These food records are being used by the Bureau for a report on seasonal variations in food expenditures which will appear at a later date. They were turned over to the Bureau of Home Economics, United States Department of Agriculture, where they have been analyzed for dietary adequacy. Preliminary results of that analysis are included in "Nutritive value of diets of families of wage earners and clerical workers in North Atlantic cities, 1934-35," which appeared in the Monthly Labor Review for July 1936. A more complete report is that by Hazel K. Stiebeling and Esther F. Phipard entitled "Diets of families of employed wage earners and clerical workers in cities," United States Department of Agriculture Circular No. 507, January 1939.

Appendix G

Analytical Procedure

Income classification.

Data on family composition, earnings and income, and group expenditures are summarized by income levels at \$300 intervals to provide a basis for comparison of the results from this investigation with earlier studies. The same data are also presented by income level for families of types comparable with those studied in the 1917-18 investigation.

Classification by economic level.

The analysis of data on family expenditure is complicated by the fact that, although, in general, the family spends as a unit, families are not comparable units, because of variation in size and age composition. A family of two adults with an income of \$1,200 is obviously on an economic plane considerably higher than a family of six adults with the same income. Statistical analyses of the expenditures of a sample of families chosen at random is further complicated by the fact that in most cities the size of the family among wage earners and clerical workers increase as income increases, as larger family incomes are more apt to come from increases in the number of earners, than from the higher wages of the husband.

To meet these difficulties as well as to take into account the fact that consumer demand varies with age, sex, and occupation, the families were sorted according to economic level as measured by amount spent per total-expenditure unit. To ascertain the economic level of each family the first difficulty arose in the necessity of taking into account the variations in consumer demand within each family due to differences in family composition.

Expenditure unit—food relatives.

The problem was met in the present investigation by computing separately for food, clothing, and for other items, the customary expenditure of persons of different age, sex, and occupation. The scale used in computing the relative expenditure for individuals for food was based on data secured from the Bureau of Home Economics, showing quantities of food estimated as actually consumed by persons of different age, sex, and physical activity. These estimates were based partly on the energy requirements of persons of different age, sex, and occupation, and partly on data on actual food consumption of families of urban wage earners and clerical workers. (To have secured an adequate number of records of the actual food consumption of individuals for this purpose would have required an expenditure far beyond the resources of either of the Bureaus concerned.)

It was necessary to convert estimated quantities of food consumed by persons of different age and sex into estimated food costs. This was done by multiplying these quantities of food by retail food prices to find the ratio which expenditures for women and boys of various age groups bore to expenditures for full-time employed men aged 20 and over. The problem arose as to whether the prices used as multipliers should be individual city prices or averages for the United States. A test was conducted on a sample of 12 cities where the study was in process in the winter of 1935. For each of these cities, the same quantities of food were multiplied by the respective retail food prices for the given city. It was found that, despite the use of varying prices from city to city, the relative expenditures for women and children bore approximately the same ratio to those for employed men in each city. It was therefore decided to use, for all 12 of these cities, a scale of consumer expenditure for food based on United States average prices in 1934. The same procedure was followed for all other cities, with adjustment for changes in food prices as the investigation advanced. The food expenditure scales were recalculated on the basis of average prices in the year ending May 31, 1935, and on average prices in the calendar year 1935, and these food relatives were used for schedules in cities where the field work was completed later. Within a given city, where field work extended over a considerable period, each schedule was coded with the food relatives for the period most nearly corresponding to the schedule year.

TABLE C.—Relative food expenditures for persons of different age, sex, and occupation¹

Age-sex-occupation group	Calculated on the basis of—		
	Average prices, calendar year 1934	Average prices, year ending May 31, 1935	Average prices, calendar year 1935
<i>Male</i>			
Boys under 2.....	0.51	0.48	0.48
Boys 2 and under 4.....	.54	.52	.51
Boys 4 and under 7.....	.61	.59	.58
Boys 7 and under 9.....	.79	.77	.76
Boys 9 and under 11.....	.86	.84	.84
Boys 11 and under 13.....	.92	.91	.90
Boys 13 and under 16.....	1.01	1.00	1.00
Boys 16 and under 20.....	1.02	1.02	1.02
Men, 20 and over, unemployed and part-time employed.....	.90	.90	.89
Men, 20 and over, full-time employed.....	1.00	1.00	1.00
<i>Female</i>			
Girls under 2.....	.51	.48	.48
Girls 2 and under 4.....	.54	.52	.51
Girls 4 and under 8.....	.61	.59	.58
Girls 8 and under 11.....	.79	.77	.76
Girls 11 and under 14.....	.86	.84	.84
Girls 14 and under 20.....	.92	.91	.90
Women, 20 and over, moderately active.....	.83	.83	.82
Women, 20 and over, active.....	.92	.92	.92

¹ Based on estimated actual diets of urban wage earners and lower-salaried clerical workers prepared by the Bureau of Home Economics, U. S. Department of Agriculture.

Expenditure unit—clothing relatives.

The data secured in the present investigation were used as the basis for computing the scales of expenditure for clothing of persons of different age, sex, and occupation. The average annual clothing expenditures of white men wage earners and clerical workers, 21 through 35 years old, in all the cities covered in the present study were \$56.68. This amount is regarded as unity (1.00) in arriving at standard scales of expenditure for persons of other ages, sex, or occupation. In the following table average clothing expenditures of each class of persons are expressed as percentages of the average clothing expenditures of this group of employed men.

TABLE D.—*Relative clothing expenditures for persons of different age, sex, and occupation*

[1.00=(\$56.68), expenditure of male wage earners and clerical workers aged 21 and under 36]

Age	Male				Female			
	Under 5, and at school	At home	Clerical	Wage earner	Under 5, and at school	At home	Clerical	Wage earner
Under 2.....	0.19				0.19			
2 and under 6.....	.34				.38			
6 and under 9.....	.48				.47			
9 and under 12.....	.53				.56			
12 and under 15.....	.63				.77			
15 and under 18.....	.88	0.74	1.02	1.02	1.01	0.94	1.08	1.08
18 and under 21.....	1.01	.80	1.14	1.13	1.28	1.05	1.60	1.63
21 and under 24.....		.57	1.14	1.07		1.04	1.66	1.60
24 and under 27.....		.48	1.13	1.00		1.02	1.64	1.46
27 and under 30.....		.46	1.10	.96		1.00	1.62	1.36
30 and under 36.....		.44	1.04	.92			1.58	1.23
36 and under 42.....		.43	.94	.87		.88	1.43	1.07
42 and under 48.....		.41	.87	.81		.78	1.35	.94
48 and under 54.....		.39	.80	.75		.69	1.18	.84
54 and under 60.....		.37	.75	.69		.58	1.03	.76
60 and over.....		.35	.65	.60		.40	.78	.67

Data based on white families in 42 cities combined.

The same scale was used for both white and Negro schedules. As there were not a sufficient number of cases of Negroes, it was not possible to develop a separate Negro clothing-relative scale.

Since it was necessary to begin the coding and the tabulation of the schedules before the field work was completed, the computations of unit clothing expenditure¹ were at first made on the basis of preliminary scales computed from the clothing-expenditure data in the schedules available at the time for the given city or group of cities within a region. After the field work had been terminated and the tabulation completed for all 42 cities, the scales given in the foregoing table were constructed on the basis of data for all these cities, all of which had populations over 50,000.

It was desired that the scales should represent only those differences in clothing expenditure which are due to the three factors (age, sex, and occupation) which were being measured in the computation of the scales. To compute the scales, after elimination of the influence of

¹ By unit clothing expenditure is meant the annual amount spent for clothing per clothing-expenditure unit.

the other variables of family income and family size in the computations, the following steps were taken.

(1) Cards representing each person in all the families studied in cities with populations over 50,000 were sorted into cells such that all persons classified in a given cell were from families with the same income and of the same size, and the group of persons whose clothing expenditure was being studied were of the same age, sex, and occupation.

(2) The average clothing expenditure for all the persons in each cell was then computed.

(3) These averages were then combined for each age-sex-occupation group. In making this combination, each age-sex-occupation group within each family-income family-size class was given the same weight. These weights were determined by the number of persons in each family-income family-size cell for all age-sex-occupation groups combined. The resulting averages for each age-sex-occupation group are the averages that would have been obtained if the distribution of persons by family income and family size had been the same in each age-sex-occupation group. The procedure followed in combining averages by the use of constant weights is similar to the procedure of a standard population frequently used by biologists in attempting to compare rates while eliminating differences caused by differing distributions by sex, age, marital status, etc. (cf. Raymond Pearl, *Medical Biometry and Statistics*, Philadelphia and London, 1930, ch. IX, "Standardized and corrected death rates," pp. 265-277).

(4) For each sex-occupation group there were now a series of average clothing expenditures for each age. These results were smoothed to eliminate minor irregularities.

(5) Absolute clothing expenditures at each age were converted to relatives by dividing the smoothed averages for each sex-occupation group for each age by the smoothed average expenditure for employed men aged 21 through 35.

The revised scales developed on this basis are still subject to the limitations of the nature of the population sampled, but they represent what seem to be the most definitive scales yet available showing effective demand for clothing among families of wage earners and clerical workers.

The revised scales were used to recode and reclassify the schedules for unit expenditure² in order to test the magnitude of the differences

² By unit expenditure is meant total amount of family expenditure per expenditure unit. The unit expenditure, which is used as synonymous with "economic level" and with "amount spent per expenditure unit," is the sum of the following three items:

1. Unit food expenditure, or total family food expenditure per food-expenditure unit;
2. Unit clothing expenditure, or total family clothing expenditure per clothing-expenditure unit;
3. Per capita "other" expenditure, or total family expenditure for all items, save food and clothing, per person in the economic family for 52 weeks.

in final results which would have been obtained had the revised scales been used at the outset. The new distribution of families was not substantially different from the distribution for which the preliminary clothing scales were used. Since clothing expenditures represent a fairly small proportion, ranging from one-eighth to one-tenth of family expenditures, it will be seen that even a fairly large revision in the clothing expenditure scales would yield only a slight change in total unit expenditure. The nature of the process will be clear from the sample code sheet, p. 437. Consequently, the distribution of families by economic level did not shift much with the introduction of revised relative clothing-expenditure scales. Since, upon analysis, the changes were not found to be important, in all tables in the Tabular Summary and in the text, the distribution of families by economic level remains as it was established by the coding based, among other elements (see sample code sheet, p. 437), on the preliminary relative clothing-expenditure scales.

The revised clothing scales did, however, produce a more pronounced change in the item "average number of clothing-expenditure units per family," and correspondingly in the figure "unit clothing expenditure."³ The figure for "average number of clothing-expenditure units per family," based on the revised scales, is therefore used throughout in the Tabular Summary and in text tables 6 and 8 on pages 26 and 31. Correspondingly the figure "average number of expenditure units" ⁴ per family, whenever it appears in the Tabular Summary or in a text table, is based, among other elements including food and "other" expenditure, upon unit clothing expenditure computed from the revised relative clothing-expenditure scales.

The item "average number of clothing-expenditure units" or "average number of expenditure units" or both, occurs in tables 2, 3, 5, 6, 19, 20, 22, and 23 of the Tabular Summary.

The change in "average number of expenditure units" resulting from use of the revised scales was much smaller than the change in "average number of clothing-expenditure units" for the reason discussed in a preceding paragraph on the small change in the distribution of cases according to unit expenditure. Nevertheless the figure on the revised basis appears in the text and the Tabular Summary since it is consistent with the revised figure for clothing expenditure units. The latter figure is published rather than the preliminary figure since it is believed, after extensive analysis and experimentation, that it represents a better approximation, based on more complete data and a more satisfactory summary technique, to a definitive answer to

³ This figure is not published in the Tabular Summary but the reader may compute it by dividing the average total family clothing expenditure for any group by the average number of clothing-expenditure units per family in that group. It is shown in text tables 6 and 8, pp. 26 and 31.

⁴ This figure is derived by dividing total family expenditure by total unit expenditure. The computation of this latter figure was explained in footnote 2, p. 434. Also see sample code sheet, p. 437.

the question: How does the clothing demand or customary clothing need of one family of given composition compare with that of another family of different composition? Lacking any absolute scale of clothing need, any such scale of clothing expenditure can, at best, only be an approximation. Nevertheless, the figures set forth on the basis of the revised scales are presented as the result of considerable study and experimentation as the most definitive yet available (granted the assumptions that age, sex, and occupation do create real differences in the social situation of individuals, which in turn affect their need to make clothing expenditures as much or more to meet social custom as for reasons of health). A further reason for presenting the revised clothing expenditure unit figures is that the figures stand as such independently of any other figures in the tables. That is, since the preliminary figures were used simply as a means to classification of cases and nowhere in the tabulations as an end product, the presentation of revised figures for this one item in no way disturbs the usefulness of the other items not affected by the revision.

Expenditure unit—other items.

Any attempt to compute customary expenditures on items other than food and clothing for persons of different age, sex, and occupation in the wage-earner and clerical groups would have required securing data on the expenditures for individuals in greater detail than seemed practical. It was, therefore, decided to compute expenditure per adult male equivalent for "other items" on the assumption that in actual practice with a given income a family divides the use of its goods, and its expenditures for all items other than food and clothing, about equally among the members of the family.

Total expenditure unit.

In finally computing the amount spent per total-expenditure unit for a given family, three measures of family size were calculated, one in terms of food-expenditure units (i. e., food relatives), another in terms of clothing-expenditure units (i. e., clothing relatives), and a third giving equivalent full-time members of the economic family (i. e., a relative of 1.00 for each member in the economic family for 52 weeks). In computing each of these measures for an individual, the length of time the individual was dependent on the family funds was taken into account. This was done by multiplying the appropriate relative by the decimal equivalent of a year during which the person was dependent on family funds.

Expenditures by the given family for food were then divided by the number of food-expenditure units in the economic family, expenditures for clothing by the number of clothing-expenditure units in the economic family, and expenditures for other items by the number of equivalent full-time persons in the economic family. The number of dollars spent per total-expenditure unit was secured by adding to-

gether the three quotients and this sum was used as a measure of the economic level of the family. The following sample code sheet shows the method of coding for a specific family:

FIGURE C. *Sample code sheet*

City: Detroit. Color: White. Schedule No. 135. Year ending Feb. 28, 1935.		Persons	Age	Occupation	Weeks in economic family
	a. Homemaker.....	45	At home.....	52	
	b. Husband.....	47	Clerical.....	52	
	c. Son (widower).....	24	do.....	52	
	d. Daughter.....	18	At school.....	26	
	e. Daughter.....	14	do.....	52	
	f. Granddaughter.....	2	At home.....	52	

Persons in economic family	Item	Food	Clothing	Other	Food, clothing, and other
a.....	Expenditure units.....	0.83	0.78	1.00	XXXXX
b.....	do.....	1.00	.87	1.00	XXXXX
c.....	do.....	1.00	1.13	1.00	XXXXX
d.....	do.....	.46	.64	.50	XXXXX
e.....	do.....	.92	.77	1.00	XXXXX
f.....	do.....	.54	.38	1.00	XXXXX
All.....	Total.....	4.75	4.57	5.50	XXXXX
Do.....	Family expenditure.....	\$793.00	\$168.35	\$1,044.15	\$2,005.50 (E)
Do.....	Amount spent per expenditure unit.....	\$166.95	\$36.84	\$189.85	\$393.64 (U)
Do.....	Total, expenditure units.....	XXXXX	XXXXX	XXXXX	5.09 (E) + (U)

It should be noted that the computation of family size in terms of expenditure units is based on estimates of customary relative expenditures without regard to the adequacy of the goods consumed to meet physical or psychological needs. These units are not adapted for use in setting up or in revising ideal or normal budgets. That is, it is impossible to use these units in calculating the family budget needed if a child is to be added to the family without disturbing the level which the family budget was originally prepared to meet, nor may they be used to determine the subtraction possible if a budget computed for a family of given size is to be applied to a family with one less child, but without disturbing the standard which the budget was calculated to purchase. Such additions or subtractions can properly be made for the purpose indicated with these expenditure units only if the standard by which the budget was originally computed was in terms of these same units. Thus, if a budget for a family of given size has been calculated on the basis of a given number of expenditure units, using the relatives described in this study, along with some predetermined sum taken as meeting the needs of an adult man, the budget may be increased to care for the addition of a person to the family by use of this series of units. But if the original budget for, let us say, a family of two adults and two children was calculated on some other basis, the increase of the total budget by the decimal equivalent represented by an expenditure unit from this study corresponding to a child of specified age will not assure the continuance

The application of the factors symbolized by 1, $\frac{1}{2}$, $\frac{1}{3}$, etc., to the number of families, however, would have reduced the number of families in the sample below the number actually scheduled and necessitated the second element of the adjustment factor. This element was a constant computed by dividing the actual number of families scheduled by the reduced number of families obtained as outlined in the preceding paragraph. This ratio¹⁰ (R on table E) was then multiplied by the factor 1, $\frac{1}{2}$, $\frac{1}{3}$, etc. (or in practice the reciprocal of the average number of earners in each earner group (see column 4 on table E) to obtain the adjustment factor for each earner group. The final adjustment factor is shown in column 6 of table E.

Correction for the third element, namely the differing proportions of multiple-earner families found at differing income levels or differing economic levels, does not appear in table E, but is in fact operative when the adjustment factors shown in table E are applied to the actual data. This can be demonstrated from the illustration of this procedure in table F. Though the adjustment factor shown in column (3) of table F is numerically the same for each given earner group in each income level, and in each economic level, as the case may be, the procedure followed results in effect in averages or percents which are weighted by the constant adjustment factor (column 3) multiplied by the ratio of the varying number of unadjusted families in each earner

¹⁰ The introduction of the denominators 1, 2, 3, etc., takes care of correct adjustment in securing the averages; the use of R adjusts the count of families to the number actually scheduled. The factor R , which could be canceled out of the formula for the average, is nevertheless preserved for the sake of symmetry, so that the weights would be the same in the formula for average and the formula for count. (See footnote 12.)

group (column 2, line f, k, etc.) to the total number of adjusted families in the expenditure or income group (column 4, line s).

It can be seen from table F that the weighted average for the first economic level is

$$\frac{1}{35} \left[\frac{78.50}{19} \times (1.3715) \times 19 + \frac{57.00}{10} \times (0.7828) \times 10 + \frac{15.40}{2} \times (0.5298) \times 2 \right]$$

It is apparent that $\frac{78.50}{19}$, $\frac{57.00}{10}$, and $\frac{15.40}{2}$ are averages for the successive earner groups, and $\frac{1.3715 \times 19}{35}$, $\frac{0.7828 \times 10}{35}$, and $\frac{0.5298 \times 2}{35}$ are the weights. Following the same line of reasoning, the corresponding weights for the second economic level are

$$\frac{1.3715 \times 44}{70}, \frac{0.7828 \times 9}{70}, \text{ etc.}$$

From the fact that $\frac{1.3715 \times 19}{35}$ does not equal $\frac{1.3715 \times 44}{70}$ it is apparent that the weight for the first earner group varies from level to level in accordance with the varying proportions of families with different numbers of earners, at each level. In this respect, the process of adjustment used is superior to the use of even up-to-date census data, since the adjustment takes account of the variation in the importance of families with a given number of earners from economic level to level, while census data would not have given this information by level.

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