# Money Disbursements of Employed Wage Earners and Clerical Workers in Twelve Cities of the South 1934–36

By

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



### UNITED STATES DEPARTMENT OF LABOR Frances Perkins, Scoretary BUREAU OF LABOR STATISTICS Isodor Lubin, Commissioner

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# UNITED STATES DEPARTMENT OF LABOR

# FRANCES PERKINS, Secretary,

## BUREAU OF LABOR STATISTICS

IBADOR LUBIN Commissioner

SIDNEY W. WILCOX Chief Statistician A. F. HINBICHS Chief Economist

HUGH S. HANNA Chief, Editorial and Research

STAFF FOR THE STUDY OF MONEY DISBURSEMENTS OF WAGE EARNERS AND CLERICAL WORKERS IN 12 CITLES OF THE SOUTH

> FAITH M. WILLIAMS Chief, Cost of Living Division

GERTRUDE SCHMIDT WEISS and ALICE C. HANBON General Directors of Field Work

> ALICE C. HANSON General Director of Tabulation

EDNA D. HOBNER Assistant Director of Tabulation

DIRECTORS OF FIELD WORK

ANN JAMES, Baltimora, J RUTE ALLEN, Birmagham Sam Bahron, Della Robert Thomas, Houston RUTH ALLEN and Robert Thomas, Jackson ROBERT THOMAS, Jacksonville

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#### SUPERVISORS OF TABULATION IN THE FIELD

ENID FRANCIS; SAMUEL M. GAHAGEN; ALICE W. HERBST and BELLE RANKIN; KATHRYN HEATH AND EPPA HEATON; SARA LANDAU AND EDWARD KILPATRICK; ROBERT THOMAS AND WAYMAN REGISTER.

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# PREFACE

This bulletin is one of a series which present data on the incomes and expenditures of 14,668 families of wage earners and clerical workers in 42 cities with populations over 50,000. In the present volume are set forth data covering the incomes, current expenditures, savings, and deficits of 2,710 white workers' families in 12 cities of the South, 858 Negro workers' families in 9 of those cities, and 100 Mexican families in Houston. Figures are also shown on housing facilities, the amount and kind of food, clothing, and housefurnishings purchased in the year of the study, and the types of medical care received.

The investigation was undertaken in 1934-36 for the primary purpose of providing the basis for a revision of the weights used for the cost-of-living indexes published currently by the Bureau. The last comprehensive investigation had been made in 1917-19 when wartime price changes and wage adjustments had made imperative a study of the expenditures of workers' families. In the years intervening since that date, rapid changes in workers' purchasing habits had taken place. Changes in technology and in organization of production had served to bring within the workers' reach many items which had been nonexistent or prohibitive in price in the war days. These included silk stockings, rayon fabrics, the widespread use of electricity, modern plumbing, the automobile, and the radio, as well as many other producte of modern industry. Such fragmentary studies by private agencies and by the Bureau as had been made since 1919 pointed to impressive changes in workers' consumption habits. A comprehensive inquiry into these new levels of living was accordingly urgently required to obtain an adequate list of the items properly entering into an index of the cost of goods purchased by wage earners and clerical workers.

The increasing importance of the South in the industrial life of the Nation makes the data presented in this volume of particular interest. When compared with comparable data for other regions, they make possible a comparison of the difference in levels at which families in varying regions of the country are actually living.

The study in Houston was made in cooperation with the Works Progress Administration and the Bureau of Social Research of the University of Texas. In Memphis, the Tennessee Relief Administration and the Shelby County Consumers' Council cooperated in the

#### PREFACE

investigation, while in New Orleans the School for Social Work of Tulane University and the Louisiana Emergency Relief Administration lent their aid. The study in Richmond was carried on in cooperation with the Richmond and Henrico County Consumers' Council, the Virginia State Tax Commission, and the Virginia Emergency Relief Administration. In Baltimore, Dallas, Louisville, and Norfolk, the investigation was carried on with the cooperation of the Works Progress Administration. The investigation was furthered by the assistance of many officials in these organizations and from interested individuals and civic bodies too numerous to be mentioned here by name. In addition, two groups must be recognized as having made the study possible: the individual worker who performed the field collection and office tabulation of the data, often under unfavorable conditions, on a high plane of professional responsibility; and the housewives who laid aside their household tasks long enough to furnish answers to the detailed questions in the schedules.

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. Adrienne C. Mayer assisted in checking the table forms and preparation of text.

> ISADOR LUBIN, Commissioner of Labor Statistics.

MAY 1939.

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# Part V.—Appendixes

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# 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. 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 vear 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. 633; "Payment of debts to: Firms selling on installment plan," p. 637; and "Increase in debts: Payable to firms selling on installment plan," p. 638.)

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. 634), 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. 684). 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 649, for method of handling sales tax.

### Notes on individual tables.

NOTE.—For each table except 21, 22, 23, 24–A, and 25 comparable data for Negro and for Mexican families appear immediately following those for other white families. There are also no Negro data comparable to those for the other two groups given in tables 24–B and 24–C.

#### 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 page 688.

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 658.

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 631. 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 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 633.

Inheritance.-See page 634.

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 nusurance 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 debis 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 634.

#### 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, page 638.

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 number of 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, page 688.

Meals bought and eaten away from home include tips.

Candy, ice cream, drinks, sic., 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 bousing 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 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" or "rent" are entered under these respective headings 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. 640.) 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.

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 cars.—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.

Medicins 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. 640) or on other real estate (see p. 636), or sales tax (see p. 649), or indirect taxes, or automobile licenses and 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 —.

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.<sup>1</sup>

2. Average expenditure per person purchasing.<sup>1</sup>

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 purchasing <sup>1</sup> 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 purchasing <sup>1</sup> yields the average number of articles purchased per person purchasing.<sup>1</sup> 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	1, 027
b. Number of families having men 18 years of age and	
Over	973
c. Number of men 18 years of age and over	1, 273
d. Average number of men per family having men	1.31
Hats (felt):	
e. Number of persons purchasing	537
f. Average number of articles per person (all persons)	0.44
g. Average expenditure per person (all persons)	\$1. 10
h. Total number of hate purchased $(f \times c)$	560
s. Average number of hate purchased per person pur-	
chasing $(h+\epsilon)$	1.04

1 Qr person for whom purchased.

(2) Similarly to obtain the average expenditure per person purchasing <sup>1</sup> 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 purchasing <sup>1</sup> yields the average expenditure per person purchasing.<sup>1</sup> For example, using the figures given above:

j. Total expenditure for hats by the group  $(g \times c)_{-----}$  \$1,400.30 k. Average expenditure for hats per person purchasing <sup>1</sup>

(j+e)\_\_\_\_\_ 2.61

(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:

- $\lambda$ . Total number of hats purchased  $(f \times c)$  560 (Note this total has already been computed above.)
- L Average number of hats per family in the group  $(h \div b)_{---} = 0.58$

(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, 400. 30
	(Note this total has already been computed above.)	
774.	Average expenditure for hats, per family in the group	
	(j+b)	1, 44

(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, 400. 30 (Note this total has already been computed.)
- n. Average price paid per article purchased \*  $(j \div h)$  ..... \$2.50

(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:

- A. Total number of hats purchased\_\_\_\_\_ 560

(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:

<sup>1</sup> Or person for whom purchased.

<sup>&</sup>quot;The average price paid for an article purchased should not be computed by dividing the "average expanditure 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.

j. Total expenditure for hats by the group  $(g \times c)$  \$1,400.30

p. Average expenditure for hats per family (j+a) 1.36

Section I.—For method of computation of number of clothing expenditure units per family see appendix G, page 690. 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, shoestrings, 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, collon, house.—Are defined as cotton dresses bought for housework.

Women and Girle: 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 page 638.

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. 644 and 645).

Textils furnishings: Other.—Includes paid help for making curtains, furniture covers, etc., 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 24-A.-Coefficients of variation of money disbursements

and

TABLE 24-B, C and D.—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.

### 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  $Y=a+bX^{\dagger}+cX$ , 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.—Bureau of Labor Statistics indexes of changes in costs of goods purchased by wage earners and clerical workers are available for 9 of the 12 cities covered in this region. Taking average costs in 1923-25 as 100, the indexes applying to the period covered in these cities are as follows:

Baltimore	84.8
Birmingham	71. 8
Houston	79.3
Jacksonville	78.0
Memphis	77. 3
Mobile	80.6
New Orleans	79.8
Norfolk	84.0
Richmond.	80. <del>8</del>

These index numbers represent weighted averages applying to the entire period covered by the schedules. They indicate that in the period covered, prices in Birmingham stood at the lowest level, relative to those that had prevailed before the depression, and highest in Baltimore. 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 costs between cities.

Employment.—In general, employment in the area was increasing over the period covered by the investigation in the South. Data on variations in employment in particular cities are not available, but the low points in the Bureau of Labor Statistics indexes of employment and pay rolls in manufacturing for the United States as a whole were reached in July 1932 and March 1933, respectively. The former date is approximately 2 to 3 years before the dates to which the bulk of the data for the Southern cities apply.

Sales tax.—No general sales tax was in effect in 10 of the 12 Southern cities during the period to which the data in the respective cities apply. The exceptions were Jackson and Louisville. In Jackson there was a tax of 2 percent on retail sales. In Louisville a tax of 3 percent on retail sales became effective on July 1, 1934. From that date until July 1, 1935, the tax was computed as a straight 3 percent of the amount of the retail sale. On and after July 1, 1935, to January 15, 1936, when the tax was repealed, a bracket system was used for computing the tax, as follows:

1 cent to 9 cents	No tax.
10 cents to 35 cents	1 cent tax.
36 cents to 70 cents	2 cents tax
71 cents to \$1.09	3 cents tax.

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. The tax is not showni n Tabular Summary, table 7, for Louisville since the data on detailed food expenditures apply to the period when the tax was not in effect.

Relief.—Since families having received relief at any time during the year were excluded from the investigation, it is important to have some estimate of the proportion of families which were made ineligible for the study on this account.

Table A shows the number of families of two or more persons on relief during the month of the survey when the relief load reached a maximum. These figures and the average size of such relief families were furnished by the Division of Social Research of the Works Progress Administration. The last column of the table shows the percentage which such families formed of the total number of two-or-more-person families reported in the 1930 Census of Population.

## TWELVE CITIES OF THE SOUTH

# TABLE A.--Families of 2 or more persons on relief in the month during the period of the survey when relief was at a maximum WHITE FAMILIES OTHER THAN MEXICAN

Reporting area.	Months of maximum re- lief load during period of survey	Number of families of 2 or more per- sons on re- lief in that month	Average size of families on relief	Percentage which relief families were of total num- ber of families of 2 or more persons in 1930
Baltimore. Birmingham <sup>1</sup>	March 1935 March 1935 February 1935 September 1934 November 1934 March 1934 September 1934 September 1934 April 1935 November 1934 November 1934	14, 700 13, 100 6, 300 6, 000 1, 900 3, 100 3, 100 3, 900 5, 900 7, 900 7, 900 1, 500	4.284 4.80 3.80 4.280 4.280 4.183 3.183	9.8 22.4 8,7 9.3 23.4 17,7 5.0 4.4 38,0 10.9 4.2 6.1
Baltimore Birmingham <sup>1</sup> Jackson <sup>1</sup> Louisville. Memphis <sup>6</sup> Mobilo <sup>7</sup> New Orleans <sup>1</sup> Norfolk. Richmond	NEGRO FAMILIES March 1935	30, 500 18, 200 2, 600 1, 100 4, 600 14, 400 3, 400 2, 200	4.0 4.1 4.1 4.1 3.8 3.4 4.1	37. 2 47. 2 10. 0 19. 6 50. 7 49. 0 36. 6 19. 2
	MEXICAN FAMILIES			

Houston 4	March 1935	1, 500	5.3	39.9

Data are for Jefferson County.
 Data are for Dallas County.
 Data are for Harris Connty.
 Data are for Harris County.
 Data are for Duval County.
 Data are for Shelby County.
 Data are for Mobile County.
 Data are for Orleans Parish.

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# Appendix B

# Scope of the Investigation

# Geographic area covered in the Southern region.

The investigation was confined to the city limits in the following 10 Southern cities:

Baltimore, Md.	Louisville, Ky.
Dallas, Tex.	Memphis, Tenn.
Houston, Tex.	Mobile, Ala.
Jackson, Miss.	New Orleans, La.
Jacksonville, Fla.	Richmond, Va.

In Birmingham and Norfolk it was found that such a large proportion of the industrial population lived in the area immediately outside of the city limits that the sample would not be representative without the inclusion of families living in certain suburbs. The suburbs included in the Birmingham area were Fairfield, Tarrant City, Irondale, and Bessemer. Those included in the Norfolk area were Portsmouth, South Norfolk, Craddock, Berkely, Ocean View, and Money Point.

# Scope of the Nation-wide study.

In addition to the 12 Southern cities, 30 other cities with population over 50,000 were covered in the investigation of the 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
Buffalo, N. Y.	families).
Johnstown, Pa.	Portland, Maine.
Lancaster, Pa.	Rochester, N. Y.
Manchester, N. H.	Scranton, Pa.
Philadelphia, Pa. (white and Negro	Springfield, Mass.
families).	

East North Central Region (B. L. S. Bull. 636):

Cincinnati, Ohio (white and Negro familics). Cleveland, Ohio. Columbus, Ohio. Detroit, Micb. Grand Rapids, Mich. Indianapolis, Ind. (white and Negro families). Lansing, Mich. Milwaukee, Wis

West North Central and Mountain Legion (1	), D. S. DUII, 041);
Denver, Colo.	St. Louis, Mo. (white and Negro
Kansas City, Mo. and Kansas City,	families).
Kans. (white and Negro families). Minneapolis and St. Paul, Minn.	Salt Lake City, Utah.
Pacific Region (B. L. S. Bull. 639):	
Los Angeles, Calif. (white other	San Diego, Calif.
than Mexican, and Mexican	San Francisco, Calif.
families).	Seattle, Wash.
Sacramento, Calif.	

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 alloted 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,	Denver, Colo.	New York, N. Y.
Wash.	Dubuque, Iowa	Omaha, NebrCouncil
Albany, Ga.	Everett, Wash.	Bluffs, Iowa
Atlanta, Ga.	Gastonia, N. C.	Peru, Ind.
Beaver Falls, Pa.	Haverhill, Mass.	Portland, Oreg.
Bellingham, Wash.	Logansport, Ind.	Providence, R. I.
Billings, Mont.	Mattoon, Ill.	Pueblo, Colo.
Butte, Mont.	Mobile, Als.	Springfield, Ill.
Chicago, Ill.	Muncie, Ind.	Springfield, Mo.
Columbia, S. C.	New Britain, Conn.	Wallingford, Conn.
Columbus, Ohio.	New Castle, Pa.	Willimantic, Conn.
Connellsville, Pa.	-·· - •	2

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#### SCOPE OF THE INVESTIGATION

#### BUREAU OF HOME ECONOMICS

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

# Period Covered by the Study

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

The periods to which the largest proportion of the data secured in each city apply are as follows:

Schedule year ending	City	Percentage of data ap- plying to schedule year indi- cated
November 1834	Birmingbam Memphis. New Orleans. Richomnd. Mobile. Jackson. Jackson. Jacksonville. Baltimore. Dallas. Houston (white other than Mexican) Louisville. Nortoik. Honston (Mexican)	100 97 93 100 91 100 100 100 86 94 100 83

TABLE B.—Period to which data in schedules for cities in the Southern region apply

		Numi	ber of a	chedul	65 CO VI	wing th	ie sche	dule 70	ser of—	•
City, color of sample, and period to which data on schedule apply	Total	Sept. 1, 1033, to Aug. 31, 1034	Dec. 1, 1933, to Nov. 30, 1934	Mar. 1, 1034, to Feb. 28, 1035	June 1934 to May 1935	Sept. 1, 1934, to Aug. 31, 1935	Dec. 1, 1934, to Nov. 30, 1935	Mar. 1, 1935, to Feb. 29, 1936	June 1, 1036, to May 31, 1036	Sept. 1, 1936, to Aug. 31, 1936
BALTIMORE (WHITE FAMILIES)			<u> </u>							
Schedule year	419 419 419 419 419 107 107							419 419 419 419 419 419 419 419		
Sept. 1, 1935 to Nov. 30, 1935 Dec. 1, 1935, to Feb. 29, 1936 BIEMDIGHAM (WHITE FAMILIES)	107 107							107 107	•••••	
Schedule year	<b>202</b> 202 202 202 <b>202</b> <b>202</b>	 	202 202 202 202 203		•••••					

### PERIOD COVERED BY THE STUDY

### Number of schedules covering the schedule year of-Sept. 1, 1934, to Aug. 31, 1935 Bopt. 1, 1033, to Aug. 81, 1034 1024, , 28, Dec. 1, 1934. to Nov. 30, 1935 June I, 1935, to May 31, 1930 June 1934 to May 1935 3 1036, 1023. 8 1035, 7ec. 1, 19, to Nov. 3 1034 Mar. 1, 16 to Feb. 4 1035 Bopt. 1, 16 to Aug. 3 1936 Mar. 1, 16 to Feb. 5 1036 City, color of sample, and period to which data on schedule apply Total BIRMINGHAM (NEGRO FAMILIES) Schedule yeer Schedule quarter: Dec. 1, 1933, to Feb. 28, 1934..... Mar. 1, 1933, to May 81, 1934..... June 1, 1933, to Aug. 81, 1934..... Sept. 1, 1934, to Nov. 30, 1934..... 101 101 101 101 101 ----.... ----101 101 .... .... 101 101 DALLAS (WEITE FAMILIES) Scheduls year..... Schedule quarter: Mar. 1, 1935, to May 31, 1935.... June 1, 1935, to Ang. 31, 1935... Sept. 1 1935, to Nov. 30, 1935... Dec. 1, 1935, to Feb. 29, 1936... 204 294 294 294 294 294 294 294 -.... -----.... \_\_\_\_ ------------294 HOUSTON (WRITE FAMILIES) Schedule year. 258 Schedule year Schedule quarter: Mar. 1, 1934, to Feb. 23, 1935.... Mar. 1, 1935, to May 31, 1935... June 1, 1935, to Aug. 31, 1935... Sept. 1, 1935, to Nov. 30, 1935... Dec. 1, 1935, to Feb. 29, 1935... Mar. 1, 1938, to May 31, 1936... 70 184 258 70 70 114 114 114 74 74 74 74 70 70 .... 258 114 188 74 HOUSTON, (MEXICAN FAMILIES) Schedule year. 100 Schedule guarter: Schedule guarter: Mar. 1, 1935, to May 31, 1935. June 1, 1935, to Aug. 31, 1935. Seyt. 1, 1935, to Nov. 30, 1935. Dec. 1, 1935, to Feb. 20, 1936. Mar. 1, 1936, to May 31, 1936. June 1, 1936, to Aug. 31, 1938. 34 34 34 34 34 67 33 ------33333 33 100 ----<u>33</u> 100 66 33 33 22 JACKSON (WHITE FAMILIES) Scholule year..... Scholule quarter: Mar. 1, 1934, to May 31, 1934, June 1, 1934, to Aug. 31, 1934, Sept. 1, 1934, to Nor. 30, 1934 Dec. 1, 1934, to Feb. 28, 1935. Mar. 1, 1935, to May 31, 1935. 150 42 42 106 150 42 150 150 12 108 .... \_\_\_\_ ----108 42 \*\*\*\*\* 106 108 JACEBON (NEGRO FAMILIES) Schedule year...... Schedule guarter: Mar. 1, 1934, to May 31, 1934... June 1, 1634, to Aug. 31, 1934... Sept. 1, 1934, to Nov. 30, 1934... Dec. 1, 1934, to Nov. 30, 1935... Mar. 1, 1935, to May 31, 1935... 100 45 100 44 55 55 55 100 \_\_\_ ----100 £Š ---55 6E JACEBONVILLE (WHITE FAMILIES) Schedule year 178 Schedule quarter: Sept. 1, 1934, to Nov. 30, 1934..... Dec. 1, 1934, to Feb. 28, 1935..... Mar. 1, 1935, to May 31, 1935...... 178 178 178 178 178 June 1, 1935, to Aug. 31, 1935. 178 178

### TABLE B.—Period to which data in schedules for cities in the Southern region apply—Continued

### TWELVE OFTIES OF THE SOUTH

### Number of schedules covering the schedule year of-Mar. 1, 1934, to Feb. 28, 1935 Sopt. 1, 1934, to Aug. 31, 1935 Dec. 1, 1934, to Nov. 30, 1935 June 1, 1935, to May 81, 1936 Sept. 1, 1933, to Aug. 31, 1934 Dec. 1, 1933, to Nov. 30, 1034 June 1634 to May 1935 3 1935, City, color of sample, and period to which data on schedule apply Mar. 1, 16 to Feb. 2 1936 Bept. 1, 1, to Aug. 5, 1936 Total LOUISVILLE (WHITE FAMILIES) 197 Dec. 1, 1934, to Feb. 28, 1935. Mar. 1, 1935, to May 31, 1935 20 20 20 160 197 140 140 140 Mar. 1, 1935, to Aug. 31, 1935, Sept. 1, 1935, to Aug. 31, 1935, Dec. 1, 1935, to Feb. 29, 1935, Mar. 1, 1936, to May 31, 1938. 20 20 37 ---------197 37 37 177 140 ---37 37 LOUISVILLE (NEGRO FAMILIES) 74 Schedule year. Schedule guarter: Mar. 1, 1935, to May 31, 1935... June 1, 1935, to Aug. 31, 1935... Sept. 1, 1935, to Nov. 30, 1935... Dec. 1, 1935, to Feb. 29, 1936... 74 74 74 74 74 74 74 74 ----MEMPHIS (WHITE FAMILIES) Schedule year 194 Schedule quarter: Sept. 1, 1933, to Nov. 30, 1933 47 €7 Dec. 1, 1933, to Feb. 28, 1934, Mar. 1, 1934, to May 31, 1934, June 1, 1934, to Aug. 31, 1934, Sept. 1, 1934, to Nov. 30, 1934 194 194 194 147 147 147 47 47 47 ----147 147 MEMPHIS (NEGRO FAMILIES) Schedule year. 94 Schedule year. Schedule quarter: Sopt. 1, 1033, to Nov. 30, 1933. Dec. 1, 1033, to Feb. 28, 1934. Mar. 1, 1934, to May 31, 1934. June 1, 1034, to May 31, 1934. Sept. 1, 1934, to Nov. 30, 1934. 8888 8 94 94 94 95 86 86 86 -8 --MOBILE (WHITE FAMILIES) Schedule year. 145 Schedule guarter: Dec. 1, 1633, to Feb. 28, 1934. Mar. 1, 1934, to May 31, 1934. June 1, 1933, to Aug. 31, 1634. Sept. 1, 1034, to Nov. 30, 1934. Dec. 1, 1034, to Nov. 30, 1934. 2 $\mathbf{2}$ 148 148 146 144 144 144 144 2 ----22 ..... ----Dec. 1, 1934, to Feb. 28, 1935. 144 MOBILE (NEORO FAMILIES) Schedule year. 94 Schedule guarter: Mar. 1, 1934, to May 31, 1934..... Juns 1, 1934, to Aug. 31, 1934..... Eopt. 1, 1934, to Nov. 30, 1934..... Dec. 1, 1934, to Feb. 28, 1935..... 94 94 94 94 94 94 94 94 ..... ..... NEW ORLEANS (WHITE FAMILIES) Schedulo year. \$18 Scheduls guarter: Bept, I, 1933, to Nov. 30, 1933... Dec. I, 1933, to Feb. 28, 1934... Mar. I, 1934, to May 31, 1934... June I, 1934, to Aug. 31, 1934... Bept, I, 1934, to Nov. 30, 1934... 87 87 318 318 318 281 87 87 87 281 281 ..... 281

### TABLE B.—Period to which data in schedules for cities in the Southern region apply—Continued

# TABLE B.—Period to which data in schedules for cities in the Southern region apply—Continued

		Numb	er of a	bedule	s 8076	ring th	s scher	iule ye	er of—	
City, color of sample, and period to which data on schedule apply	Total	Sept. 1, 1933, to Aug. 31, 1934	Dec. 1, 1933, to Nov. 30, 1934	Mar. 1, 1934, to Feb. 28, 1935	June 1934 to May 1935	Bept. J, 1934, to Aug. 31, 1935	Dec. 1, 1934, to Nov. 30, 1935	Mar. 1, 1935, to Feb. 29, 1936	June 1, 1935, to May 31, 1936	8ept. 1, 1935, to Aug. 31, 1036
NEW ORLEANS (NEGRO PAMILIES)										
Schedule year	83 7 83	 7 7	76	 						PB
June 1, 1934, to Aug. 31, 1934 Sept. 1, 1934, to Nov. 30, 1934	83 76		76 76	 	 					
NORFOLK (WHITE FAMILIES) Schedule year	162									+====
Mar. 1, 1935, to May 31, 1935 June 1, 1935, to Aug. 31, 1935 Sept. 1, 1935, to Nov. 30, 1935 Dec. 1, 1935, to Feb. 29, 1936	162 162 162 162							162 162 162 162		
NORFOLE (NEGEO FAMILIES)										
Schedule year	109 109 109 109						 	109 109 109		
Dec. 1, 1935, to Feb. 29, 1936	109							109		
Scheduls year Schedule quarter: Sept. 1, 1933, to Nov. 30, 1933	192 59	 59								
Dec. 1, 1033, to Feb. 28, 1034 Mar. 1, 1034, to May 31, 1934 June 1, 1934, to Aug. 31, 1934 Sept. 1, 1934, to Nov. 30, 1934	192 192 192 133	89 59 59	433 133 133 183			 				
RICHMOND (NEGRO FAMILIES)										
Behedule quarter: Sept. 1, 1933, to Nov. 30, 1933.	91 91	21				 				
Dec. 1, 1933, to Feb. 28, 1934 Mar. 1, 1934, to May 31, 1934 June 1, 1934, to Aug. 31, 1934	96 95 95	21 91 21	78 75 75							
Sept. 1, 1934, to Nov. 30, 1934	75		75		<b> </b>					

# 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, 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. 660 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 the sample employees may be illustrated by the procedure followed in Richmond. In that city, a composite list of all employers hiring 5 or more employees, together with the number of their employees, was compiled from varied sources. Partial lists were obtained from each of the chamber of commerce, the industrial commission, the N. R. A. code authorities, and the Bureau of Labor Statistics. Visits were made directly to State and city offices to obtain the numbers of public employees. In counting the numbers of public employees, those earning over \$2,000 per year were excluded from the total. Direct visits were also made to the public utility companies and to headquarters of certain chain stores to ascertain the numbers of their employees. Trade association officials furnished lists of the principal employers and approximate numbers of their employees in several lines of service and retail trades. Names of employers were arranged alphabetically and any duplications eliminated. The number of employees in each of these establishments was then cumulated, the grand total being 45,202. Dividing this total by 300, the number of schedules desired for Richmond, the sampling ration 1: 154 was obtained. The first employer's name was chosen by adding down the cumulative total of employees to 71 (a number chosen at random from among the numbers 1 to 154). 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 225, 379, 533, and so on through the cumulative list of employers. The field agents then visited those firms and from their personnel lists drew the sample employees whose names occurred at

the position on the list of the individual firm corresponding to those numbers. Thus if it chanced that employees 687 and 841 were employed by the same firm X and a total of 649 employees had been employed by firms ahead of this firm X on the employee list, employee 687 would be the 36th employee on the pay roll or personnel list of firm X and employee 841 would be the one hundred and ninetieth employee of firm X.

In all the cities except Baltimore, Dallas, Houston, Louisville, and Norfolk, a single sampling ratio was used. In these cities, the composite list obtained did not provide 100 percent representation for each of the industrial groups. To offset differences in the completeness of the employer lists in given types of employment, separate sampling ratios were used for different industry and trade groups. It is believed that this procedure provided a sample as nearly as possible like that which would have been secured if complete employed lists had been available and a single sampling ratio had been used.

# 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 were taken to prevent it. A family with three earners on the lists of employees would have approximately three chances <sup>3</sup> 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 South, two methods were employed, either of which reduced to equality the chance of each family to be included in the final sample. In Baltimore, Dallas, Houston, Jackson, Jacksonville, Louisville, and Norfolk, schedules were secured only from families in which the name of the employee drawn from the lists of employees

<sup>\*</sup>See appendix G, p. 696, footnote 9.

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 entire wage earner and lower-salaried clerical group. 'n Birmingham, Memphis, Mobile, New Orleans, and Richmond, 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.<sup>4</sup>

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. Edwards 5 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 classifications \* 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

<sup>4</sup> See appendix G, pp. 695-698.

<sup>\*</sup>A Socio-Economic Grouping of the Gainful Workers in the United States. Journal of the American Statistical Association, 1933, vol. 28, pp. 377-387,

<sup>&</sup>lt;sup>4</sup> 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 1985.

<sup>74390\*-41-42</sup> 

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 \$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 carner 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 3½ 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.<sup>7</sup>

(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.

<sup>&</sup>lt;sup>†</sup> Guesis 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 expanditures.

# Appendix E

# Nativity of Homemakers in Families Studied

# White families.

In all cities except Baltimore, 95 percent or more of the homemakers in the white families in the 12 Southern cities who furnished information were native-born. These percentages compare closely with, and in general are slightly higher than, those for all married white women in the respective cities according to the 1930 census. The corresponding figures are shown in table C.

	Percentage United	born in the i States		Percentage United	bern in the States
City	White homo- makers in samples studied in 1934-36	Married white women (1930 census)	City	White home- makers in samples studied in 1934-36	Married white women (1930 census)
Baitimore Birmineham Dailas Houston Jackson Jackson	89.9 98.6 98.2 97.1 100.0 98.3	86, 2 96, 9 97, 1 95, 4 99, 3 95, 1	Louisville. Memphis	99.4 99.5 98.6 97.8 95.6 98.0	96. 2 97. 4 97. 3 95. 2 95. 3 97. 0

TABLE C.-Homemakers born in the United States

Among the small numbers of foreign-born homemakers in the Southern samples, women from Italy, Germany, and Russia predominate. This corresponds with the census data.

In part, the smaller proportion of the foreign-born among the families 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 appendix D for the limits set by the investigation.) In the Southern cities, inability of foreign-born homemakers to speak English was a negligible factor in reducing the number of schedules

# NATIVITY OF HOMEMAKERS IN FAMILIES STUDIED 665

successfully completed by families of the foreign-born. In no city was this problem of sufficient magnitude to require the addition of foreign-speaking field agents to the staff.

# Negro families.

As would have been expected on the basis of census data, in all of the 9 southern cities in which a Negro sample was taken, 100 percent of the homemakers furnishing information were born in the United States.

# Mexican families.

Approximately one-third of the homemakers of Mexican descent who furnished information were born in the United States, and twothirds in Mexico. Only one reported birth outside these two countries. (See Tabular Summary, table 2.) Mexican field agents were employed in Houston.

# 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

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

Agent

Schedule No.

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131. Squash, summer	L					159. Canaad	•				
183. White topping	<u> </u>					180. Pinespolist Frieb					
138. Other vegetables.						151. Canned		*****			
VEGSTABLES, DRIED, AND NUTS						162. Meines		-			
184. Beans: Dry		<u>f</u>				163. Plums: Fresh					
115. Canned, dried		<b>_</b>				194. Canned					
136. Pener Black syst			<u> </u>			168. Other fruit.					
137. Ölh <del>ar.,</del>	╉━┉		╂	<u> </u>		208. Oldur					
158. Nuter Shalled		<b> </b>				187. Grape juice					
189. In shell		ļ	<b> </b>			168. Other fruit juices			L		
160. Piezza burbler		<b> </b>	<b> </b>		<b> </b>	FRUIT, DEIED					
FRUIT, FRUIT JUICES	1			ł		169. Apriloite					
MI. Langer	+		+			170. Peacher	h	*****			
IG. Ortague	+	<u></u>	÷	<u> </u>		171. Pronet					
143. Ompetruit: Freeh.	┼──				┝╍╍	179. Reisins					
Ist. Canned	J	1	<u></u>	1		173. Data	Ļ	L	L <sub>et</sub>	l	

# HI (4). FOOD FURCHASED AND CONSUMED LAST & DAYS-Continued

	1	-		Perdund	1					1	(Dessile-		Paratanial	1
ITTEM.	φ <b>ni</b> t.	unal late	-	Wall, prim	Jitxymma			тты		Velt	Want had	Quant-	trait prim	Reposed
174. 17						202. Bo	ard at scho	al						
175. Oliver			Ċ			208. Ca	odr. lee sr	um. drinks	. eta					
MIACELLANEOUS ITEMS				ſ.		304	Town		liine			1		
178. Gelatina				_			WVMDER	MRALE LA	ST 7 DAYS IT	URNISUR	D PROM 1	1	TOND	assaurrage
177. Packaged despet miniates	}					_		1				1		
178. Tas					<u> </u>		r						2020	
17h. Coffin	<u> </u>	1				f-m	Ap.	Hann	A****	E	Away		i	Away
190. Cores						۹ <u>ــــــــــــــــــــــــــــــــــــ</u>	<u> </u>					_		
(B). Choselale	L					ا								
187. Vineger	ļ					د	L					_		
188. Bels	<u> </u>					ه			<b></b>					
134. Baking powder, yeart, soda	L		**	xx				[				_		
185. Spiem, extracta	ļ		××	**		<i>f</i>				_	<u> </u>			
196. Calepp, sauces	ļ		х×	×x		ø	· ·····						·····	
167. Pickies, diver			××	××		λ	-				<u> </u>			
188. Boop: Tomaio				ļ,		<b>د</b>								
159. Other (specify)						5	ļ.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
190. Cod-liver of	<u> </u>					k	<u> </u>							
191. Proprietary foods							BOMR-FR	DUCKD PO	OD AND OIT	ni ar ro	OD UNED	LAPT Y	DAYS	
192. Other fonds								irra	M		ĺ	Court	m -	Yahan
198. Bolt dricks communed at home							<i></i>							
194. Other drinks emsumed at home						L	-							
195. Terras food committed at home	**	**	xx	XX		3								
FOOD BOUGHT AND BATEN AWAY						<b>X.</b>								
196. Lunches at work							<u> </u>							_
197. Lamber at school	Ĺ							FACTORS A	PROTING P	COD IIAI	1778 (NP#1	11 <b>8'33)</b>		
198. Other meals, not vacation: Breakfast						Religiou	s							
(99. Lunch						National	ar restal							
200. Dipner						Health					~~····			
The Manla on vacation						Other								
······································				*****	Ç	ŋ							X <b>A</b>	

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### TH (A). YOOD FURCHASED AND CONTURED MANT I DATE--Continued

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THE S	(8).	FOOD-ANNUAL	REPRESENTATION
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								Rependinges for guerrier anding												
		-	ilin i						Marramiza	: \$66		Patrony		36ar 81			A organi II.		u	
•								Week	Manth	Quertar	Teek	Menth	Querter	<b>₩</b> wk	Month	Questar	Week	Mankà	Querter	
1	COC	BATEN	I AT H	OME		,														
L. "Qrpeeries" (exclu	iding ji	sime of b	<u>iouisbol</u> i	d open	ulon, tol	sanco, el	•)-+-		$\vdash$					······						
i, Additional supend	ituren:	Baked	gooda				*****										*******			
La		Mant a	nd fish_						· · · · · · · · · · · · · · · · · · ·									}	-	
-		Eggs			**					<u> </u>	<u> </u>			*****	r	····			L	
•		Miik M	ad erean	0						·			****	*****		•••••••••••••••••••••••••••••••••••••••		······		
•		Vagetal							·				~				·			
*	Prulk.									······	**********	~~~~~~~~~~				····	·	, · · · · · · · · · · · · · · · · · · ·		
BOOD BODOR	T 4 M	Candy.			ROM N	OM8	$\rightarrow$													
. Lanabas at work																				
. Examples at school.																				
. Other meals not v	<b>inatio</b>	n Break																		
•		Land	<b>.</b>									1								
•		Diam	a																	
Maile on version													i •							
Board at school																			<u> </u>	
. Candy, ice cranm,	drinks	, sta																		
TOTAL LOOD										E										
	80	OD-BU	VING I	PROC	EDURE				Ī	H	OME-P	RODUC	ED FOO	D AND	OIPT	B OF FO	00 00	R YEA	R	
	[	Geomy	•		other (spec	17 <b>7</b> )	A rite	1		\							1	ľ		
		Zinckopu	adanda.		Indepa	Cuchani.Ca		10									- 43mm154	unay	Value	
	Charles	فدر درر	-	<b>***</b>	Out and	Service.	(1941) (1941)	‴	~ 1											
												•								
. Mest	┝		}	·	}		хж			as										
Groseries	}	h	<b> </b>	<u> </u>	ļ		XX			94										
. MOL				┣		ļ				96	····		*****	***						
Baked goods	·			+			**			20										
. Fruits, waretables,	l	L	L	1			**	1		~										



### IV (A), CLOTHING ..... HEN AND BOYS

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IV (A). CLOTH		IV (B). CLOTHING-WOMEN AND GIBLS-Continued															
	) Wasta	æ	Age .	·*···	Monita Weeks	<b>.</b>	Ağı			Manthur				)dana)a Wastes	<b>#</b>	Alth	
	Musia Dar	Trèse	Margunard Hanry		Num	N'xies	Rocyanand) Lizzyw	ER S		Man	37cinu	Nepund- Hure	Quar- tar par- shared	ž	Reim	Ropund- 16mm	Quantar pol
, Olevan Celles, work		[							8. Contr: Heavy, plain								
Other, work	-	<u> </u>							7. Heavy, fur trimmed				L			·	
. Lasther strest									8. Pur								l
. Other, street	_	ļ							9. Light, wool		<u> </u>						معد
, Ties									10. · Light, cotton		ļ		L				
Collara	_				·				11. Light, slik, rayon		ļ						
. Bathing sults, sun milis	_	L	L						12. Play suite: Wool knit		ļ						
. Mandhamhiofa	_ <b>_</b>	<u></u>							13. Cotton suada		}						ļ
. Accumorian		<b>[</b>					<u> </u>	L	16. Other		<u> </u>	L	<b></b>				
. Rathrob-									15. Raincoata		ļ			******			
. Cleaning, repairing		<b></b>							16.) (Wool kait		·	<u> </u>	L	_			ļ
, Other (quality)	_								17. Sweaters Wool fabria								
TOTAL		<u>L</u>							18. jaskets. Losther, İnstherette.		ļ		ļ				
									19.7 lother		ļ	ļ				*****	L
IV (B). CLO	THING		MUN	AND	omli	•			20. Bulke: Wool		<u> </u>						
									21. Silk, myon.		ļ		*******	4.000 mm			
	Manh	******			-	<b>.</b>			22. Other		ļ				ļ		
27×14			1	<del>.</del>			1	-	23.) (Bilk, reyon		ļ	ļ		• • •		·····	<b></b>
	Num-	Ittim	Reparch Hore	Quar pur	Name	Reim.	Reports Liture	Goar-	24. Walsts and Cotton		ļ					·	
				<u> </u>					28. Other		ļ						
. Hais: Pali.	-		· · · · · · · · · · · · · · · · · · ·	ļ			Į	<b></b>	20. Skirts: Wool							·	
i. Birew	_	ļ		ļ		<b> </b>			27. Other		ļ	·				******	
L Tabria		<b>_</b>		<b> </b>					28. Dresses: Colton, bruss		ļ			·			
i. Coge and berefs: Wool,		.		<b> </b>					29. Ociton, house								
i. Otber		L		L		L			30. Cotton, street		<u>t</u>		L				

TWELVE CEITES OF THE SOUTH

				Membe Weeks	<b>T</b>	Ays.		Mento Wetta	<b></b> -			Manbar access AP	Menter Age			
				17	Price	Expend iturn		Nume-	Price	iiarə	Qour- bor pur- chased	ITTANK Nota- ber Price Repairs Large States Date Price Rep Iton	red Quar- ier par- stuard			
<b>31</b> .	Drusses: Co	1400. Pl						_				5.) (Cotion				
23.		. <b>187</b> 01						- 1				Pajamas, loung-Bilk, rayon				
n	800	k. Mayor	·										<u> </u>			
<b>54</b>	We	 		[								9. Bethrobes				
26.	We	ni				[						Timones, perlisees				
14	OU	100										I. Hoer: Silk				
<b>ST</b> .						<b></b>										
20.	Annone			1		<b></b>						ân-				
28	Constantin		· · · · · · · · · · · · · · · · · · ·	<u> </u>		<u>,                                     </u>		*******				Ramo				
40.	Walabara he		-h					~~~~~~				Ortion				
41	Column Calder		#2201 <b>48</b>				········				•••••••					
48. 48	due anno	,			·····		••••••••				********	it. The Change and Annual and Annual and Annual and Annual and Annual Annual Annual Annual Annual Annual Annual				
	CIUE						******				******	, pour a prophysical second and a second				
-	are a constant	L		···	·							Dree				
<b>61.</b>	Cornels, gard	199									la. 1999 gang yang yang yang yang yang yang yang	). Drug				
•	Branderes						****	• #• = ====				. 8pmt				
40.		( <sup>Co</sup>	tion		********						487 A. Bar yu	L Sport				
67.	combinatio		oor		******							. House allphere				
<b>48</b> .	)	100	k, 78,700				······································				···•	I. Shoe repairs				
49.	Underwalste,	, shirte.										5. Bhos shines				
\$0.			Cotton								-	i. Rabbers				
<b>81</b> .	Bloomer an ties.	d paa-	Rayon			ļ						Arriles, galtere				
62,			(am								*******	L GLOVER: Cotten				
8 <b>4</b> .	Mighteowne	/Cotto	n, 1146 t		L					L		Гл				
<b>84</b> .	and sleep	Cotto	h, fannel									Bathing mits mp mits				
\$5.	mis.	LAURE, 1										Handkerchiefs				
			-									1. Pure				
											()	()				

### IV (E), CLOTHING-WOHRN AND, GIBLS-Continued

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# TWELVE CITIES OF THE SOUTH

			Туре о	f on list.			lumption of sta	14		Payment		Prim		
	CLOTHES	Dagan farment	Breaklised gody	Mallweder	6 cumto to \$1.	Meletiber- Band	Ounical	Munchy sity	Dudi	Charge to motint	Instations	Magnilar	il inte	
Ma	F# '0;	<b></b>	į,											
1.	Costa			·		• <del>• • • • • • • • • • • • • • • •</del> •							***	
2.	Hata	ļ							- <b>577613</b> wiwiwiwi					
<b>X</b> .	Shout			*******	************								ļ	
4	Sulta		****					· <b></b>		*****			·	
8.	Underweer										••••••		*****	
We	Diality (n:	1					İ.							
6	Coste								~~ <del>~~~~~~~</del> ~~~~~~~~~~~~~~~~~~~~~~~~~~~				~~~~	
7.	Hata	L					 						·	
8.	Stow												*	
9.	Dresses													
10.	Usdarwoor					****	****	****						
Cs	III.ORIN'S:													
11.	Outerwear							• <del>••••••••••••</del> ••	, <b>.</b>					
12.	Underwest		****			1		******			l		******	
1	THEMISELINGS AND EQUIPMENT	Degretitions	Spectalized shop	Mail-order	Other (spec- liy)	Neighbor-	Ogquai	Numbr diy	Cash	Charge ap-	<u>Enclaümiest</u>	Pagniar	<b>State</b>	
L	Formitons: Bulter									**				
2	Major pieces			•••		******						-		
3.	Klichen													
4	Small ploces						ļ					-		
5.	Mechanical refrigerators											······		
6.	Vacuum cleaners													
7.	Elostrio washers	<u> </u>												
B.	Other electrical equipment													
	Sheets and pillow same													
10.	Other household testiles		[											
					-	(1.8)			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		0000			

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### PUBCHASING PROCEDURES IN SCHEDULE YEAR

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ITEM	Number	Price	Roppedi-	Querter particular	MIK	Wanter	Prim	Records-	Quarter porelised
FURNITURE					25. Blanheis	***			
L. Suiter: Living room					29. Comforie, guilte	4 udahildaa ayalayaa			
3. Bedroom					30. Bheeld				
8. Dining room					S1. Pillewcass				
4. Bedr. Wand					32. Bedspreads, couch covers				
K. Motel					33. Tablesloths, napkins, dollas: Cotton				
6. Cote, ether Wood					34. Liven				
7. Metal					35. Towels: Linen				
S. Bedentos					85. Ooticm, Turklah				
9. Davesporta					87. Other, colton				
10. Couches, daybada					35. Table concers, dresser scorts	*****			
It. Drammin		<b>]</b>		]	39. Curtains, draperies				
12. Chiffeniers, obsite		Į	<u> </u>	<u> </u>	40. Dishrieths, cleaning sloths, etc		<u> </u>		
12. Richberrie buffels			<u> </u>		41. Other (specify)				
14. Dedz					SILVERWARE, CHINA, AND GLASSWARE				
15. Bookenen, booksheivet					43. China or percelain, table				
15. Tables, groupt klichen					48. Glassware				
17. Chabre Word					44. Tableware: Silver				
II. Upholaiand	1				45. Qihar (meel/y)				
19. Benchen storis, footstoris					48. Other				
20. The sarie, wheel trave			L		ELECTRICAL EQUIPMENT				
21. Standa, racka, contattort.					47. Vacuula cleanara				
Sh. Other			l		43. Refrigerators (electric)				
TEXTILE FURNISHINGS					49. Electric storm, hot plates				
31. Carpeta, rare (av. vda.)			<u> </u>	<u> </u>	50. Washing machines				
24. Lincison, inlaid (er, yda)					Al. Irona				7
25. Felt-bar foot sovering (av. wh.)				[	59. Iropers, manging				*
M. Matter					bit. Heatens fant				
17. Filler					64. Linht bulbs				
				ſ				Rata (and a second second second second second second second second second second second second second second s	

V. PURNISHINGS AND EQUIPMENT

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14 matrix

TEN	Nonber	Prim	Espendi-	Quarter porchased	Item	Number	Price	Rependi- ture	Quester purchased
55. Lampa					67. Pote, pans, cutlery				
50. Toarters.			•		68. Tubs, boards, wringers	******			
87. Sewing machines (electric)					69. Ironing boards, racks, basksta				
58. Other (specify)					70. Sowing machines (not electric)				
MISCELLANEOUS EQUIPMENT					71. Baby carriages, gotarts				
59. Mirrow, pistures, clocks, ornamenta					72. Trunks, hand baggage		-		
60. Carpet sweepers					75. Household tools, ladders, cana.				
61. Brooms, brushes, mops					74. Window shades, wire screens, awnings				
62. Dustpans, pails, etc					75. Lawn mowers, gardan equipment				
65. Gas refrigenstore			L		75. Repairs, cleaning	 			
64. Lesborne					77. Other (specify)				
65. Stoves and ranges (not electric)	*****		•		78. Total fumbbings and equipment			·	- 81
66. Canning equipment, cookers.									

### V. FURNISHINGS AND EQUIPMENT-Continued

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### FURNISHINGS AND EQUIPMENT RECEIVED FREE

ITEM	Quantity	Value	ITTM	Quantity	Válno
			11.	·····	
- * *********			12		
			18		·····
			15		
ő			16		1.7 fees
7			17		······································
8			18		
10.			20.		
		ία	0		10

VL. TRANSFOR		VIL RECREATION									
· · · · · · · · · · · · · · · · · · ·	Xey	ecolitare for	quarter abd.	<b></b>		Itap	Expenditoren for generies ending				
	Narobber 30	Totermary	May 21		ITEM	Morrishur 30	Yukumany Xi	May St.	Angent		
1. Auto motoreycia bioyala	*				1. Newspapers: Street						
2. Auto, make year			ł		3. Boms dalivary				<u> </u>		
X			1		S. MARAUAR (specify).						
					4	_			ļ		
8. Gar Regular			r		5						
A 9555-0				·^	a Warsher forward to the w				······		
t ba											
a. cu					7. Loss Ubrary						
6. Time	•	*****	*********	÷	8. Associations (nerostion)		********	***********			
Toberman ounderman and					9. Entertaining: In home (except food	)					
8. Repairs and maintenance (specify)					10. Out of home						
······································	4	1 '	1	1	11. Movies: Adult, usual price	•					
······		1			12. Child, usual price			_			
8. Carage rant, parking					18. Flars, concerts						
10. Linnes					16. American amoria				1		
I. Taxes					16 Other and and and a			••••••			
12. Insurance Pire						***********	······				
lå. Thefk					16. Abdio: Photo						
14. Public Hability					17. Upkeep	****	K.A 1000 000 000 0000 000				
5. Property damage					18. Musical Instrumenta		·				
16. Collision					19. Sheet music, records, rolls			******			
17. Pines or damages					20. Athletic equipment, supplies, etc	*********		•			
18. Rent of auto or motorcycle			<b></b>		21. Children's play equipment				L		
19. Rafirmd					22. Campras, films, and photo equipme	n <b>k</b>	<u> </u>	•			
20. Bost			ļ		23. Pete (numbers and unkerp)						
1. Al					94 Classoftan						
22. Bus: Interation.	***										
28. Lotal					20. Sagen		h				
24. Trolley.					1 25. Pipe tobaceo		h		****		
\$6. Tezi		<b> </b>			27. Other tobacco				L		
26. Other (specify)	-	<u> </u>		<b> </b>	28. Other rearantion (specify)						
27. TOYAL Unsupertation		1		L.m.m.m.r.	20. Toral recreation		L	****	L		

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-		<b>T</b>		NONA	T CARE				X. FORMAL BDUCATION						
_			Quan) pri		*	ryunitare q	arier sodia	•-	Reportium etarter antig						
	••••••	34m	*****		Marrambar 32	Typenaty 36	May 41	A 19955006 \$1	Mary M. Ang						
1.	Hair outs		ļ						1. Away: Tuition, fees, books, supplies						
2	Risto				·	<i>.</i>		ļ	2. Hones: Tuition, music, danse, books, sup-						
8.	Bhampoos,		—		·				2 Tonu duction						
4	Masleurus														
8.	Permanent waves	┣	<u> </u>		[			f							
6.	Other waves		<u> </u>	·····					1. Church and Bunday School						
¥.	Other setvice		L						2. Community chest, other organizations.						
	Tolist soup			<del></del>	· · · · · · · · · · · · · · · · · · ·				8. Thank Poll, income, personal property						
9.	Tooth pasts, month was	here		······			~~~~~~		4. Torat computity walfare						
10.	Brushes (hair, tooth), to	ilet sri	ikim, a	t <b>e</b>			~·	•	XII. VQCATION						
	Connetice and tollet pre	peratio	012.I <b>I</b> ,	<b>`</b>			Matematics								
17.	TOTAL personal co	17.	WRD		CANE		<u></u>		1. Union dues or fore						
<b>Surra</b>									2. Professional association dues or fees						
1, 3	Medialas and drugi								S. Technical Hiersture						
9, 3	Ryagianaan			·····		}			4. Other (specify)						
<b>#</b> . 1	Bot-mater bottles, qrutcl	ies, etc	0,4,004,000.	******		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			8. Toral voestion						
4. 1	G. P home visits st	\$	_						XIII. GIFTS AND CONTRIBUTIONS						
<i>i</i> . 1	G. P office visite at	<b>*</b>	han <b>4</b> 484444												
6, 4	Clinio visita at \$								1. Christmas, birthday, ste						
¥. 1	Dental service			www					2. Contribuilons, support relatives						
8. 1	Specialists (specify kind)								8. Contributions, support other persons						
. •									4. Toraz gifu and contributions.						
19. I	Numbe corvice in home:	Prv	WİM						XIV. OTHER VAMILY EXPENDITURES						
μο. ) 	Horpital room days	1963 <b>5</b>						······							
11. 	ward days	85 <b>4</b>		<b>4</b> 0000.00A					1. Grunarais, isgai, iomms, gardens, etc.)						
176	BUING CAN	. RE 8.,		******					2						
1.86. s	Abracatic and health lines	1940.00		*******	********			***************************************							
19. 1 19. 1	(ipecity)						an an an an an an an an an an an an an a	TATI SALA							
	TOTAL Institut of								5. LOTAL OTHER TABLIC EXPENSION						

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CHANGES IN THE FORM A	A AMOUNT OF FAMILY A	SSETS AND LIABILITIES IN THE YEAR	
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Bossipis from Joans outstanding	Other property (specify)		Increase in rents and other debts due family	ļ
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Image: Contract of pressive payments)      Total      Total      Net change	Other debie (specify)	ļ	Payments on life insurance (premiums)	<b> </b>
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### OFFICE RECORD

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## 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, if 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 in the cities where relief workers were used in the field work, some of the 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

### FIELD PROCEDURE

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:

-	Number of food records obtained	
Baltimore	191	
Birmingham	309	
Dallas	65	
Houston	328	
Jackson	0	
Jacksonville	209	
Louisville	265	
Memphis	228	
Mobile	252	
New Orleans	186	
Norfolk	63	
Richmond	291	

These food records are being used by this 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 recalcu-lated 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.

	Calculated on the basis of—		
Age-sex-occupation group	Average prices cal- endar year 1934	Average prices year ending May 31, 1935	Áverage prices cal- endar year 1935
Mair			
Boys under 2	0. 81	0.48	0.48
Boys 2 and under 4.	. <b>, M</b>	. 52	.51
Boys ( and under 7.	. 61	] .59	.58
Boys 7 and under 9.	.79	.77	.76
Boys 9 and under 11	. 86	.84	.64
Boys II and under 13	.92	.91	.90
Boys 18 and under 16	1.01	1.00	1.00
Boys 16 and ander 20.	1.02	1.02	1.02
Mca, 20 and over, unemployed and part-time employed	. 90		96. 9
bien, zu and over, tuit-time employed	1.00	1.00	1.00
Female			
Oirls under 2	.ភ	.48	.48
Girls 2 and under 4.	.54	. 52	.51
Girls 4 and under 8.	.61	. 59	. 58
Ciris 8 and under 11.	.79	.77	.76
Girle 11 and under 14.	. 88	.84	.84
Girls 14 and under 20	. 92	. 91	.90
Women, 20 and over, moderately active.	.83	i . 63	.82
Women, 20 and over, active	1 .92	į .92	.92

TABLE D.—Relative food expenditures for persons of different age, sex, and occupation 1

<sup>i</sup> 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 E.—Relative clothing expenditures for persons of different age, sex, and occupation

		М	ale		Female				
Ago	Under 5, and at school	At home	Cierical	Wage corner	Under 5, and at school	Åt bome	Clerical	Ware carner	
Under 2 2 and under 6	0. 19 . 34 . 48 . 53 . 63 . 88 1. 01	0.74 .50 .57 .48 .46 .44 .43 .43 .43 .39 .37 .37 .35	1.02 1.14 1.14 1.13 1.10 1.04 .94 .94 .87 .80 .75 .65	1.02 1.13 1.07 96 .92 .87 .81 .75 .69 .60	0. 19 .38 .47 .56 .77 .101 1.28	0.94 1.05 1.04 1.02 1.00 .96 .88 .78 .68 .58 .58 .58 .58	1.08 1.60 1.60 1.68 1.64 1.62 1.58 1.48 1.35 1.18 1.35 1.18 1.03 .78	1.08 1.63 1.60 1.46 1.23 1.27 94 .94 .76 .76	

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

Data based on white families in 42 cities combined.

As there were not a sufficient number of cases of Negroes or Mexicans, it was not possible to develop separate Negro or Mexican clothing relative scales. It was therefore necessary to use the same scale in computing number of clothing-expenditure units in the family for the Negro, Mexican, and other white families.

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 expenditure<sup>1</sup> 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 much of 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.

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<sup>&</sup>lt;sup>1</sup> By unit clothing expenditure is meant the annual amount spent for clothing per clothing expenditure unit.

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 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 com-The resulting averages for each age-sex-occupation group are bined. 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 expenditure<sup>2</sup> in order to test the magnitude of the differences 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. 694. 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. 694) 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."<sup>3</sup> 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. Correspondingly the figure "average number of expenditure units" <sup>4</sup> 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 distribu-

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

• This figure is derived by dividing total family expenditure by total unit expenditure. The computation of this latter figure was explained in footnots 2 above; also see sample code sheet, p. 694.

<sup>&</sup>lt;sup>5</sup> 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:

<sup>1.</sup> Unit food expenditure, or total family food expenditure per food-expenditure unit;

<sup>•</sup> 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.

tion 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 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 times" 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

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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 together 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:

Sample code sheet

City: Mobils. Color: White. Schedule No. 98. Year ending Feb. 28, 1935.		Persons a. Homemaker b. Husband c. Son (widower) d. Daughter f. Granddaughter		Áge	Occupation		Weeks in economic family	
					45 47 24 18 14 2	At home Clerical do At school At home		52 52 53 36 52 52
Persons in scenomic family	Item		Food	Clo	thing	Other	Feod	, e-othing, d other
a b c d e	Expenditure units	0, 83 1, 00 1, 00 . 48 . 92 . 54	1999 A A A A A A A A A A A A A A A A A A	0.78 .87 1.13 .64 .77 .38	1,00 1,00 1,00 ,50 1,00 1,00	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		
AU Do Do	Total Family expenditure Amount spent per expenditure a Total expenditure units	unit	4.75 \$793.00 \$166.96 XIXX	\$1 \$ \$ X 1	4. 57 68. 35 36. 84	5.50 \$1,044.15 \$189,85 XXXX	x \$2. 5.	X X X X 005. 50 (E) 393. 64 (U) 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

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FIGURE C.

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 at the same standard of living of the family when a third child is added.

The measures used in calculating size of family in expenditure units in the present study are intended to represent customary behavior in families where the addition of a child is not as a rule accompanied by any addition to income, and the family must adapt its expenditures to meet the new situation. In arriving at the scales used to measure family size, no adjustments were included for possible differences in the economy of purchasing for larger as compared with smaller families.

# Adjustment for contact with families through other member than chief earner.<sup>5</sup>

In Birmingham, Mobile, New Orleans, and Richmond, a substantial number of families included in the sample were those of persons whose names had been drawn from employee lists in the usual manner, but who proved to be subsidiary rather than chief earners. This method of scheduling required that the resulting overrepresentation of multiple-earner families be eliminated by a process of adjustment during the course of tabulation. Throughout this report all data for these 4 cities have been adjusted in accordance with the procedure set forth hereafter. In Baltimore, Dallas, Houston, Jackson, Jacksonville, Louisville, and Norfolk, since the ruling of contact only through the chief earner was followed in scheduling,<sup>6</sup> the data could be tabulated without adjustment. In Memphis, schedules obtained through contact with other members than chief earner were so few that they could be discarded and the data accordingly tabulated without adjustment.

The purpose of the adjustments described in the following paragraphs was to keep the importance of families with more than one earner in the sample in Birmingham, Mobile, New Orleans, and Richmond proportionate to the number of two-earner, three-earner,

<sup>&</sup>lt;sup>5</sup> The mathematical solution to the problem of weighting to adjust for overrepresentation of multiplecarner families in the sample, discussed in this section, was developed by S. W. Wilcox.

<sup>&</sup>lt;sup>4</sup> See appendix D, p. 658.

etc., families in the entire wage-earner and clerical groups in these cities. The only available information on the distribution of families by the number of gainful workers was that contained in the 1930 Census of Population. These data were not used for the derivation of adjustment factors, however, first because the employment situation had changed drastically since 1930, and secondly because the data were available only for the population as a whole, whereas there were strong reasons for believing that the importance of different earner groups varied with economic level.<sup>7</sup> It was, therefore, necessary to construct adjustment factors from the data at hand.

The problem was to increase the importance of single-earner families and decrease the importance of multiple-earner families in the sample to the same proportions that would have been obtained had only families contacted through the chief earner been scheduled. The principle observed, was that if it had been possible to draw a truly random sample from the desired population of families of employed workers, one-earner families would have had the same chance to be included as they had in the sample as actually drawn, while twoearner families would have had one-half and three-earner families one-third the chance to be included which actually obtained when the sample was chosen from lists of workers.<sup>8</sup>

To accomplish this objective, the data were adjusted by a factor which took into account three elements: (1) The number of earners in the family, (2) the total number of families in the sample, and (3) the distribution of families according to their number of earners at successive income levels or economic levels, whichever was under consideration.

The first element is inherent in the basic problem of the adjustment of the relative proportions of one-earner and multiple-earner families. By multiplying the total number of families in the first earner <sup>9</sup> group by a number in the neighborhood of 1, the total number in the second earner group by approximately one-half, the total number in the third earner group by approximately one-third and so on, a number of families for all the earner groups combined could be obtained which was corrected for the overrepresentation of multiple-earner families.

<sup>&</sup>lt;sup>7</sup> For example, the census itself showed that 66.0 percent of the families renting their houses, but only 57.6 percent of the families owning their homes had one gainful worker.

<sup>&</sup>lt;sup>5</sup> Actually the corrective factor or weight needed with a two-carner family would be slightly different from one-half and with a three-carner family would be slightly different from one-third. For an elaboration of this point see appendix G, Bulletin No. 641.

In the actual process of tabulation, the schedules were sorted into groups according to the number of equivalent full-time earners at the quarter nearest the date when the sample was selected. This figure was the nearest appraximation to the exact number of persons in the family on payrolls at the date of sampling. Thus families were classified in the first earner group if their number of full-time earners were 1.0 or less; as in the second earner group if their total number of full-time earners were 1.1 and 2.0; as in the third earner group if between 2.1 and 3.0, etc. Thus the first element of the adjustment factor would be the reciprocal of the average number of earners in a group rather than the simplified 35, 54, etc. Actually the two figures were very close. For purposes of discussion, the simplified figures of 36, etc., are used.

The application of the factors symbolized by 1,  $\frac{1}{2}$ ,  $\frac{1}{2}$ , 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 ratio <sup>10</sup> (*R* on table D) was then multiplied by the factor 1,  $\frac{1}{2}$ ,  $\frac{1}{2}$ , etc. (or in practice the reciprocal of the average number of earners in each earner group (see column 4 on table F) to obtain the adjustment factor for each earner group. The final adjustment factor is shown in column 6 of table D.

Earner groups <sup>1</sup>	Namber of families scheduled F	Number of equivalent full-time earners E	A verse number of equivalent full-time earners $g = \frac{E}{F}$ (3)+(2)	Reduced number of families $\frac{F}{a}$ (2)÷(4)	Final adjust- ment factor * $\frac{R}{\sigma}$ R+(4)
(1)	(2)	(3)	(4)	(5)	(6)
1.0 or less. 1.1 to 2.0. 2.1 to 3.0. 3.1 to 4.0.	108 525 18 4	98. 66 209. 75 44. 63 15. 65	0. 9578 1. 6780 2. 4704 3. 9125	107. 54 74. 49 7. 26 1, 02	1. 3715 . 7828 . 5298 . 3358
City total	250			190. 31	

TABLE F .- Derivation of adjustment factors for earner groups

<sup>1</sup> I. c., number of equivalent full-time carners in family on pay rolls in nearest quarter to date sample was drawn, by earner groups. A worker employed 13 weeks in the quarter was counted 1.0, and workers employed for shorter periods were counted as appropriate decimals.

 $R = \frac{\text{footing of column (2)}}{\text{footing of column (5)}} = \frac{250}{190.31} = 1.3136.$ 

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 F, but is in fact operative when the adjustment factors shown in table F are applied to the actual data. This can be demonstrated from the illustration of this procedure in table G. Though the adjustment factor shown in column (3) of table G 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 group (column 2, line f, k, etc.) to the total number of adjusted families in the expenditure or income group (column 4, line s).

<sup>&</sup>lt;sup>10</sup> The introduction of the denomintors 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.)

It can be seen from table E 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  $\frac{1.7715 \times 19}{35}$ ,  $\frac{0.7828 \times 10}{35}$ , 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

$$\frac{1.3715 \times 44}{70}, \frac{0.7828 \times 9}{70}, \text{ etc.}^{11}$$
  
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.

A very close relationship exists between number of earners and economic level. The need of adjustment as between proportions of families having differing numbers of earners consequently implies the need of adjustment as between proportions of families at different economic levels. It will be seen from table G that the process of adjustment, while it maintained the same total number of families in the entire city sample as were actually scheduled, provided the necessary adjustment as between economic levels.

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<sup>&</sup>lt;sup>11</sup> For same information in algebraic terms, see Bulletin No. 641, appendix G.

### ANALYTICAL PROCEDURE

		Unsd-	Adjust- ment factor M= $\frac{R}{c}$	Adjusted	Expenditure for medical care		Expenditure for recreation	
	Economic level, carner group, and sobedule No.	justed number of fami- lies F		fiami- lies FM (2)×(3)	Unsd- justed expendi- ture X	Adjusted expendi- ture XM (3)×(5)	Unad- justed expendi- ture X'	Adjusted expendi- ture X'M (3)×(7)
	(1)	(2)	(3)	(4)	(ð)	(6)	(7)	(8)
a b c d e	\$100 and under \$200- 1.0 or less: Schedule No. 136 Schedule No. 13 Schedule No. 19 Schedule No				\$6.10 8.50 4.40		*	
1 B 1 }	Total, earner group 1.1 to 2.0: Schedule No. 65 Schedule No. 51 Schedule No. 17 Schedule No Schedule No	19 1 1 1	1. 3715	28.1	78.80 6.05 4.30 9.00	\$107.66	•	-
к 1 11 13 13 13	Total, earner group 2.1 to 3.0: Schedule No. 49 Schedule No. 198	10 1 1	0. 7828	7.8	67.00 7.50 7.90	44. 62 	•	•
o P	Total, Sarber group 8.1 to 4.0: No schefules	2	0. 5298	11	15.40 0	8, 16	•	•
r	Total, earner group	0	0. 3358			. 0	•	
8 t	Total for economic level Average for economic level	81		35.0		160. 44 4. 58	•	•
bb ff	\$200 and under \$300- 1.0 or less: Total, SELET group		1. 3715	60. 8	809. 60	506, 91	<b>_</b>	
ke Ee 11	Total, carner group 2.1 to 3.0:	9	0. 7828	7.0	91.00	71. 23	•	•
		•	0. 5298		•	:		
36 tt	Totalfor economic level	57		70.00		600.78	•	•
888	\$300 and under \$400: Eto		•			8.57		
82.82	\$400 and under \$500: Etc.	•	•	-	-	•	•	•
u v	Total for city Average for city	250		250.00		5, 577. 50 22. 31	•	

### $\mathbf{T}_{\mathtt{ABLE}} \; \mathbf{G}_{\boldsymbol{\cdot}} \\ - \textit{Illustration of application of adjustment factors to schedule data}$

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Table E shows how, in practice the data from individual schedules were classified by earner groups within economic levels, the data for each earner group approximately adjusted, and the adjusted totals combined into grand totals and averages for the respective economic levels.

The unadjusted number of families in the sample is shown in column (2). The final objective was always to obtain the appropriate total or average for a given economic level (or income level) as a whole and not for each separate constituent earner group, even though to obtain this result it was necessary to use different adjustment factors for the different earner groups comprised within the economic level. Accordingly the adjusted number of families shown in column (4) is obtained by multiplying the total unadjusted number of families (column 2, lines f, k, etc.) for each earner group by the appropriate adjustment factor (column 3) derived in table D. The adjusted aggregate expenditure (columns 6, 8, etc.) for each earner group is obtained in a corresponding manner. The adjustment factor required for a given earner group is the same regardless of whether the expenditure item under consideration is the total of all categories of expenditure, or a given category, such as food or medical care, or a specific item such as groceries or dental care.

In order to obtain the average for the entire economic level (lines t, tt, etc., on table E) the adjusted aggregate (column 6, lines s, ss, etc.) was divided by the rounded adjusted number of families (column 4, lines s, ss, etc.)<sup>12</sup>

<sup>&</sup>lt;sup>13</sup> For the reader who prefers an algebraic statement of the adjustment procedures followed, see Bull., No. 641, appendix G.

