An International Survey of Recent Family Living Studies: I

Income and Expenditure

Surveys showing the income of families of different social classes and how it is spent are a valuable source of information on the standards of living of the people in the various countries, and the International Labour Office has endeavoured to stimulate such enquiries by holding conferences of statisticians to consider the best methods of conducting them and also by publishing summaries of the results of enquiries as soon as they were available. A list of the national surveys of which analyses have been published in the International Labour Review *in the last five years is given in the September 1938 issue of the* Review, *p. 425. In addition, short international tables summarising these studies have been compiled for the* Year-Book of Labour Statistics.

In view of the great interest in this question which has been shown in recent years, partly owing to the work of the International Labour Office and the League of Nations in the field of nutrition, it has been thought desirable to compile a more detailed international survey of these enquiries. A similar survey was published in the Review *in November 1933 in an article entitled "Recent Family Budget Enquiries"; this covered the chief enquiries carried out during the ten years 1920-1929. During the ten years since 1929 the results of many new enquiries have been published, and the previous survey is now somewhat out of date. The following article relates principally to studies conducted in the last ten years, and includes certain studies already covered in the 1933 survey.*

The Third International Conference of Labour Statisticians in 1926 recommended that enquiries of this kind should be held generally at intervals of not more than ten years, in order to trace the changes in the standard of living of the people at regular intervals. This recommendation has not yet been adopted generally, and several important countries do not appear at all in this article. It is hoped, however, that this survey of the work done in some 25 countries will promote the holding of such enquiries in more countries and at more frequent intervals.

In the following article, the general scope of the enquiries is first compared, the chief data on family income are then analysed, and the differences between income and expenditure discussed. This is followed by an analysis of expenditure subdivided into its main groups. A second article will be devoted to the consumption of the different foods and other items in different countries and in different social classes.

Objectives of International Comparison

In bringing together these results of recent family living studies, a number of objectives have been in view. In the first place, for any comparisons the basic conditions of the enquiries must be examined to determine within what limits and subject to what reservations valid and useful comparative conclusions may be drawn. This is an indispensable preliminary to any comparisons and is furthermore of great value from the point of view of planning studies, as illustrating the importance of coverage, period, representativeness of sample, etc.

Secondly, the material offers valuable data on the importance of various sources of income in families of different social status and income class, the various ways of meeting deficits and placing savings, and the importance of various objects of expenditure. This last, expressed in percentage terms, is one of the most important points of comparison of budgetary data. The materials can be analysed according to income or expenditure groups, by economic pressure groups (based on income or expenditure per consumption unit), by family types, etc. Such comparisons, however, suffer from the fact that the resulting percentages are not based on fixed criteria.

Finally, various possibilities exist for making comparisons on the basis of fixed standards. These offer considerable difficulties in practice. One type of comparison is of income or expenditure in terms of a common monetary unit. This offers difficulties on account of variations in exchange rates and particularly in the gold value of currencies at different times. Another type of comparison is in terms of a common unit of purchasing power. A possible series of comparisons might be based upon a standard or series of standards such as the poverty line, or the level of health and decency, in order to show the proportions of the population in each country above and below these different standards.

An important type of comparison is in terms of quantities consumed ; in this case, since quantities consumed must be related to the number of persons or families involved, comparisons must be in terms of the consumption unit, or of families of a given size and type. Such comparisons are easiest to make in the case of food consumption, and in this field standards of reference are available in the form of physiological norms for consumption of calories, proteins, minerals, vitamins, etc. The comparison may even be put in the form of the proportion of the families surveyed who have adequate or inadequate diets. Apart from food, comparisons are also possible in respect of certain items of consumption or with regard to adequacy, for example, of housing, clothing, etc.

In the present article the discussion will be confined to the first two groups of objectives—namely, the examination of the bases of comparison in the different studies, and the analysis of income according to source, of deficits according to the method of meeting them and surpluses according to their disposition, and of expenditures according to objects.

A list of countries showing the studies covered, the date of each enquiry, and the title of the publication, is given in table I.

TABLE I. RECENT FAMILY LIVING STUDIES, BY COUNTRIES, DATES AND SOURCES [1]

Country	Date of enquiry	Office in charge of the study	Publication
GERMANY	Mar.1927-Feb.1928	Statistisches Reichsamt	*Die Lebenshaltung von 2.000 Arbeiter-, Angestellten- und Beamtenhaushaltungen.* Einzelschriften zur Statistik des Deutschen Reichs, No. 22, 2 volumes. Berlin, 1932.
	1937 [2]	Statistisches Reichsamt and Deutsche Arbeitsfront	Study in progress. A general outline is given under the title "Wirtschaftsrechnungen von Arbeiterhaushaltungen", in *Vierteljahrshefte zur Statistik des Deutschen Reichs*, Vol. 46, No. 1. Berlin, 1937.
ARGENTINA	Oct. 1935 [4]	Departamento Nacional del Trabajo	*Costo de la Vida: Presupuestos Familiares.* Investigaciones especiales, Series C, No. 1. Buenos Aires, 1935.
	1935	do.	*Condiciones de Vida de la Familia Obrera.* Buenos Aires, 1937.
AUSTRIA	1934	Kammer für Arbeiter und Angestellte in Wien	*Wirtschaftsstatistisches Jahrbuch* (1936). Vienna, 1936. See also *Löhne und Lebenshaltung der Wiener Arbeiterschaft im Jahre 1925.* Vienna, 1928.
BELGIUM	Apr.1928-Mar.1929	Ministère de l'Industrie, du Travail et de la Prévoyance sociale	Armand JULIN: *Résultats principaux d'une enquête sur les budgets d'ouvriers et d'employés en Belgique (1928-1929).* The Hague, 1934.
BRAZIL	1934	Escola Livre de Sociologia et Politica de São Paulo (in collaboration with various other institutions)	Horace B. DAVIS: *The Standard of Living of Sao Paulo Workers.*
BULGARIA	June 1927-May 1928	Glavna direktsiya na statistikata	*Annuaire statistique du Royaume de Bulgarie* (1931). Sofia, 1931.
CHINA	Apr.1929-Mar.1930	City Government of Greater Shanghai, Bureau of Social Affairs	*Standard of Living of Shanghai Labourers.* Shanghai, 1934.

TABLE I. RECENT FAMILY LIVING STUDIES, BY COUNTRIES, DATES AND SOURCES *(cont.)*

Country	Date of enquiry	Office in charge of the study	Publication
COLOMBIA	Sept. 1936	Contraloría General	P. HERMBERG: "El Costo de la Vida de la Clase Obrera en Bogotá", in *Anales de Economia y Estadistica*, Vol. I, No. 1.
DENMARK	1931	Statistiske Departement	*Comptes de ménages, 1931.* Communications statistiques, 4me série, tome 100, 1re livraison. Copenhagen, 1936.
ESTONIA	1925	Riigi statistika keskbüroo	*Budgets des familles ouvrières en 1925.* Tallinn, n.d.
UNITED STATES			
(*a*) Study of wage earners	1934-1936	Bureau of Labor Statistics	Some preliminary results are published in *Monthly Labor Review.*
(*b*) Study of consumer purchases [2]	1935-1937	Bureau of Labor Statistics and Bureau of Home Economics	Study in progress. Some preliminary reports have been issued by the National Resources Committee.
FINLAND	1928	Statistiska centralbyrån	*Etude sur le coût de la vie en 1928 : Les ménages dans les villes et dans les autres centres d'habitation.* Helsinki, 1936.
GREAT BRITAIN [2]	1929-1931	D.C. Jones and others	*The Social Survey of Merseyside.* London, 1934.
(*a*) Merseyside			
(*b*) Whole country	1937-1938	Ministry of Labour	Study in progress.
HUNGARY	1929	Statisztikai hivatala (Budapest)	L. I. ILLYEFALVI: *Die sozialen und wirtschaftlichen Verhältnisse der Arbeiter in Budapest.* Budapest, 1930.
INDIA			
(*a*) Bombay [2]	Sept.1932-June1933	Labour Office (Bombay)	*Report on an Enquiry into Working Class Family Budgets in Bombay City.* Bombay, 1935.
(*b*) Ahmedabad	Oct.1933-Jan.1935	do.	*Report on an Enquiry into Working Class Family Budgets in Ahmedabad.* Bombay, 1937.
JAPAN	Sept.1935-Aug.1936	Naikaku Tokei Kyoku	*Kakei chosa Hokoku.* Tokyo, 1937.
LATVIA	1936-1937	Valsts statistiska parvalde	*Mêneša biletens.*

TABLE I. RECENT FAMILY LIVING STUDIES, BY COUNTRIES, DATES AND SOURCES *(concluded)*

Country	Date of enquiry	Office in charge of the study	Publication
MEXICO	1 July-9 Sept.1934	Dirección General de Estadística	F. BACH : *Un Estudio del Costo de la Vida.* Mexico, 1935.
NETHERLANDS			
(*a*) Medium-sized and small communities	(*a*) 29 June 1935-26 June 1936 (*b*) 28 Sept. 1935-25 Sept. 1936	Centraal bureau voor de statistiek	*Comptes de ménages de 598 familles.* The Hague, 1937.
(*b*) Amsterdam [2]	Mar.1934-Feb.1935	Bureau van statistiek (Amsterdam)	*L'enquête sur les comptes de ménages 1er mars 1934-28 février 1935.*
NORWAY	Sept.-Oct. 1927-Aug.-Sept. 1928	Statistiske centralbyrå	*Husholdningsregnskap 1927-28.* Oslo, 1929.
NEW ZEALAND	March-June 1930	Census and Statistics Office	*Monthly Abstract of Statistics*, Nov. 1930.
POLAND	1929	Główny urząd statystyczny	*Budgets des familles ouvrières 1928, 1929.* Warsaw, 1933.
SWEDEN	1933	Socialstyrelsen	*Les budgets de ménage dans les villes et dans les agglomérations industrielles vers 1933.* Stockholm, 1938.
SWITZERLAND	1936-1937	Statistisches Amt der Stadt Zürich	*Zürcher Haushaltungsrechnungen 1936-37.* Zurich, 1938.
CZECHO-SLOVAKIA	1929-1930 [2]	Státni úřad statistický	*Zprávy Státního Urádu Statistického*, 1933, Nos. 138-143, 199-207, 221-225 ; 1934, Nos. 31-34, 35-38.
	1931-1932	do	*Annuaire statistique de la République Tchécoslovaque, 1937.*
UNION OF SOUTH AFRICA	1936	Office of Census and Statistics	*Report on the Enquiry into the Expenditure of European Families in certain Urban Areas, 1936.* Pretoria, 1937.

[1] In general, the most important study in each country is given in the list, but in one or two cases more than one study of the same country are listed. In the analysis, however, the data are restricted usually to a single enquiry. In a few cases an enquiry recently made but the results of which have not yet been published is included. In the case of Great Britain two studies are listed but neither is included in the detailed tables, the first since it includes a large proportion of unemployed and relates to a depressed area, and the second since the figures are not yet available. In the case of the United States, no complete analysis of the two recently completed studies has yet been published, although in some tables figures relating to a part of the material are presented.

[2] Not included in detailed analysis.

Differences Affecting the Comparability of Results

Before proceeding to a comparison of results, the first task is to examine the differences in the scope and methods of the different studies in order to determine the limits of comparability and to select material so far as possible that will be relatively comparable. Obviously, the scope of the study—whether it deals with wage earners, salaried employees, or other families—is of primary importance. In addition, the exclusion of certain types of families, the dates of the enquiries in relation to economic conditions, the representativeness of the families selected, and whether the enquiry represents a single city, several communities, or the whole country, are all matters of great importance. Also the question of methods—whether the results are sufficiently complete, how the body of materials is selected from the whole, whether the period is ample, and whether the number of cases is sufficient to give reliable results—may be considered here.

Scope

Table II shows the number of families of wage earners, salaried employees, civil servants, agricultural workers, and employers and independent workers, included in each of the studies reviewed here.

Practically all enquiries cover wage earners; a large majority also covers one or other of the groups of salaried employees and civil servants. Apart from these, a few studies include small groups of agricultural workers, of unemployed, or of employers or persons working independently. Fortunately, for purposes of comparison the latter groups in most cases can be excluded in comparisons, and studies dealing specially with agricultural labour and with the unemployed are in general not included in the discussion. The intention of the present survey is to deal particularly with wage earners and to give data for the other groups—salaried employees and civil servants—by way of contrast.

Family Types

Table III shows the varying rules adopted in excluding certain types of families from the studies. In over one-third of the enquiries no restrictions are found. In nearly all the rest persons living alone are excluded. Many studies also exclude families with boarders and lodgers; some exclude families of husband and wife only, and others have special limitations as to the number of children or the total number of persons in the family.

Geographical Coverage and Period

Table IV shows the geographical scope of the studies. In a number of cases the sample of families selected for study was intended to represent the entire country. In other cases, the sample was drawn from a number of urban areas or from urban and rural areas; in still other cases, however, the study was limited to wage earners or wage earners and non-manual workers in a small number of towns, or even to those living in a single town. These limitations of scope must, of course, be

TABLE II. ECONOMIC CLASSES COVERED

Country	Date	Number of families included				
		Wage earners	Salaried employees	Civil servants	Agricultural or farm families	Employers or persons working independently
Germany	1927–28	896	546	498	—	—
	1937	3,000	—	—	—	—
Argentina	1933	196	112	—	—	—
	1935	50	—	—	—	—
Austria	1934	69[1]	—[1]	—[1]	—	—
Belgium (Food)	1928–29	809	224[2]	—	—	—
(Other)	1928–29	116	57[2]	—	—	—
Brazil	1934	221	—	—	—	—
Bulgaria	1927–28	93	—	173	—	—
China (Shanghai)	1929–30	305	—	—	—	—
Colombia	1936	225[1]	—[1]	—	—[1]	—
Denmark (Copenhagen)	1931	484	—	35	—	—
Estonia	1924–25	187[3]	—	—	—	—
United States[4]						
Wage-earner study	1934–36	16,000	—	—	—	—
Consumer purchases	1935–37	—[5]	—[5]	—[5]	—[5]	—[5]
Finland	1928	581	242	131	—	—
Great Britain						
Merseyside[6]	1929–31	332	—	—	—	—
Whole country[4]	1937–38	10,000[1]	—[1]	—	1,200	—
Hungary	1929	50	—	—	—	—
India (Bombay)	1932–33	1,469	—	—	—	—
(Ahmedabad)	1933–35	1,293	—	—	—	—
Japan	1935–36	1,107	566	—	—	—
Latvia	1936–37	32	—	—	—	—
Mexico	1934	281	—	—	—	—
Norway	1927–28	135	—	31	—	—
New Zealand	1930	220[1]	—[1]	—[1]	16	82
Netherlands						
(General)	1935–36	278	206	—	114	—
(Amsterdam)	1934–35	75	—[1]	109[1]	—	—
Poland	1929	84	—	—	—	—
Sweden	1933	526	—[1]	524[1,7]	—	195[8]
Switzerland						
(Zurich)	1936–37	149	197	7	—	—
Czecho-Slovakia	1931–32	414	379	155	—	—
Union of South Africa	1936	1,618[1]	—[1]	—[1]	—	—

[1] A small number of other groups (as specified) included.

[2] Including lower middle class.

[3] 283 families for enquiry into food expenditure.

[4] In cases of studies not yet completed the figures are estimates.

[5] General sample, 667,000; details of family composition, earnings, income, housing, and rent, 315,000 details of expenditure, 62,000; details of quantities and expenditure on food, 37,000.

[6] Includes a large proportion of families of unemployed and assisted persons.

[7] Lower officials.

[8] Middle class.

TABLE III. TYPES OF FAMILIES OR HOUSEHOLDS INCLUDED OR EXCLUDED

Country	Date	No restrictions	Exclusion of households					
			Of single persons	Of two persons	Lacking husband or wife	With dependants other than children	With boarders or lodgers	Other
Germany	1927–28		x					
	1937		x	x	x		x	
Argentina	1933		x	x	x	x	x	Of 7 or more children
	1935[3]		x	x	x	x	x	
Austria	1934		x[1]					
Belgium	1928–29		x		x	x	[2]	
Brazil	1934	x						
Bulgaria	1927–28	[2]						
China (Shanghai)	1929–30		x	x				8 or more persons
Colombia	1936		x	x				
Denmark (Copenhagen)	1931		x					
Estonia	1924–25	x						
United States								
Wage-earner study[4]	1934–36	x						
Consumer purchases	1936–37	x						
Finland	1928	x[5]						
Great Britain							x[6]	
(Merseyside)	1929–31							
(Whole country)	1937–38	x						
Hungary	1929		x					
India (Bombay)	1932–33	x						
(Ahmedabad)	1933–35	x						
Japan	1935–36		x				x	8 or more persons
Latvia	1936–37	x						
Mexico	1934		x	x				3 persons; 7 or more persons
Norway	1927–28	x						
New Zealand	1930		x					
Netherlands	1935–36		x					
Poland	1929		x				[7]	
Sweden	1933	x						
Switzerland (Zurich)	1936–37		x		x			
Czecho-Slovakia	1931–32	[2]						
Union of South Africa [8]	1936		x	x			[8]	

[1] A few are included.

[2] Not stated.

[3] Families of husband, wife, and 3 children under 14, only included.

[4] In one part of this study, persons living alone are excluded, but a special enquiry was made covering families of this type.

[5] In general, husband, wife, and one or more children.

[6] Lodgers only.

[7] Families living in one room shared with another are excluded.

[8] Families with no children and those with boarders not members of the family are excluded.

TABLE IV. PERIOD COVERED AND GEOGRAPHICAL SCOPE

Country	Date	Duration			Geographical scope
		One year	One month	Other	
Germany	1927-28	x			61 large and medium-sized towns.
	1937	x			265 communities (including all towns of over 50,000 inhabitants).
Argentina	1933		x		Buenos Aires.
	1935	x			Buenos Aires.
Austria	1934	x			Vienna.
Belgium	1928-29	x[1]		4 fortnights[2]	Whole country.
Brazil	1934		x		São Paulo.
Bulgaria	1927-28	x			Whole country.
China	1929-30	x			Shanghai.
Colombia	1936		x		Bogotá.
Denmark	1931	x			(*a*) Copenhagen; (*b*) Provincial towns; (*c*) Rural districts.
Estonia	1925	x[3]	x[4]		Tallinn and Narva.
United States:					
Wage-earner study	1934-36	x		4 weeks[2,5]	55 cities (42 with over 50,000 inhabitants).
Consumer purchases	1935-37	x		4 weeks[2,5]	2 metropolises (New York and Chicago), 48 other cities, 126 villages, and 22 farm sections.
Finland	1928	x			14 towns and 15 urban industrial centres.
Great Britain:					
Merseyside	1929-31	No information available			Merseyside.
Whole country	1937-38	x[6]		4 weeks[5]	Whole country.
Hungary	1929	x			Budapest.
India:					
Bombay	1932-33		x		Bombay.
Ahmedabad	1933-35		x		Ahmedabad.
Japan	1935-36	x			10 urban industrial centres.
Latvia	1936-37	x			Riga.
Mexico	1934		2 months		Mexico City.
Norway	1927-28	x			Oslo, Bergen, Trondhjem, Stavanger, and Drammer.
New Zealand	1930			13 weeks	Whole country.
Netherlands					
General study	1935-36	x			118 communities (excluding large towns).
Amsterdam	1934-35	x			Amsterdam.
Poland	1929	x			Warsaw, Lodz, and Dombrowa Basin.
Sweden	1933	x			Whole country.
Switzerland	1936-37	x			Zurich.
Czecho-Slovakia	1931-32	x			Whole country.
Union of South Africa	1936	[7]			9 urban areas.

[1] Other than food.
[2] Food.
[3] General enquiry into income and expenditure.
[4] Detailed enquiry into food expenditure.
[5] One week in each quarter.
[6] Clothing.
[7] Data based on accounts kept for one year or less or on estimates.

borne in mind in considering the data obtained in the course of each enquiry. In cases of limitation to a single town, the data are not necessarily representative of the country as a whole. In referring to these studies in the present article it will be convenient to designate each by the name of the country, adding the name of the town or other area only where the data presented here relate to a part of the published results. It should be noted that in one or two cases the data are taken from a first or preliminary report and do not show the full scope of the study as a whole [1].

The table shows also the periods covered by the reports, the great majority being a full year.

Other Points of Difference

Before discussing the representativeness of the results, other points of difference in methods, etc., may briefly be mentioned. Special limitations are found in a few studies, such as upper or lower limits of family income or in the income of the chief breadwinner, or restrictions to a particular race or national group. Differences in methods of securing the data—the household account book method or the schedule method—do not play any considerable part here, since practically all the enquiries analysed use the household account book method. Differences in methods of selection—haphazard methods or methods based on random sampling—are important, but this amounts in practice to a question of representativeness ; the point may be borne in mind in the discussion of representativeness which will follow. Differences in classification have been eliminated so far as the basic material permits in presenting the comparative data ; but in regard to many points of detail the differences cannot be corrected, and where important the point is covered in a footnote. Differences in the number and boundary lines of income groups are not of vital importance here, since comparisons between income groups are made only within a country. Finally, differences in dates must be borne in mind with especial reference to conditions of prosperity and depression in the economic background. The importance of these conditions, however, is lessened by reason of the limitation of most studies to families of workers in employment and the exclusion of the unemployed and of persons in receipt of relief.

Representativeness

In direct connection with the discussion of methods of selecting families in the preceding section, an analysis of the representativeness of the results can be made in regard to two points—income and occupational distribution of the families in the sample as compared with those of the population as a whole from which the sample is drawn.

[1] For example, in Switzerland the report for Zurich was completed and published in advance of the report for the country as a whole, and the data presented in the tables here relate to Zurich only. Likewise the report for Bogotá in Colombia is described as the first of a series ; and for the extensive studies in the United States thus far only preliminary data for certain cities have been available. Further details of these reports will be summarised in future issues of the *International Labour Review*.

Income Distribution.

Table V shows for nine countries, where reasonably comparable data are available, a comparison between the average annual earnings of the chief wage earner in the family budget enquiry and the average annual earnings of male wage earners as estimated from wage statistics.

In spite of the many reservations to which such a comparison is subject [1], the conclusion may be reached that the figures of husband's earnings as given in family living studies are as a general rule higher than those contained in general wage statistics. This corresponds to and corroborates the general impression that reliance upon the method of account books in most family living studies tends to limit the materials obtained to the better-paid part of the group of wage earners covered. In Denmark, however, the heads of families in family budget enquiries both in Copenhagen and elsewhere were in receipt of average earnings which fell between the average wages of skilled and those of unskilled workers. In Norway, the differences between the wages of the chief breadwinner in the family budget study and the average wage earner covered by wage statistics were not great.

Occupational Distribution.

A similar analysis can be made for a number of enquiries to compare the occupations followed by the chief breadwinner or by all earners in families included in the budget study with those of the population of the country or of corresponding areas as shown in the general census. Since the classifications of occupations in the two sources are in many cases different, the comparison is possible only for a very limited number of countries.

Analysis of the results for four countries—Belgium, China (Shanghai), the Netherlands, and Sweden—indicates that certain industries are over-represented and others under-represented among the families selected for study. Thus, in Belgium five industries or industrial groups are markedly over-represented—mining, quarrying, metals, ceramics and glass, and paper; and three are markedly under-represented—building, wood and furniture, and "art and precision". In the study in Shanghai, cotton-weaving, matches, and tobacco, were over-represented, while chemicals and food were under-represented. In the Netherlands study, the numbers of cases to which the method of estimate can be applied are too small to yield very definite conclusions; on the face of the figures, however, railways, mining, printing, and leather, are over-represented, while building and the metal industries are under-represented. In Sweden, five groups of industry are over-represented—mining, metals and machinery, paper and printing, food, textiles and clothing, and light and water; and

[1] For example, those due to difficulties arising from differences in the dates to which the two sets of figures relate, differences in the time unit for which wage rates or earnings are given, and differences in the type of basic materials—earnings and wage rates—available in the two sources, and difficulties arising from incomplete data on earnings according to published sources of wage statistics, as in cases where no absolute figures but only index numbers of wages are available, or where the published figures do not give a classification by sex, and from differences in the geographical scope of the two sets of materials.

TABLE V. COMPARISON BETWEEN AVERAGE ANNUAL EARNINGS OF CHIEF WAGE EARNER IN FAMILY BUDGET ENQUIRIES AND AVERAGE ANNUAL EARNINGS OF MALE WAGE EARNERS ACCORDING TO WAGE STATISTICS

Country	Date	Family budget enquiry: annual earnings of chief wage earner	Wage statistics	
			Source	Annual earnings
Germany	1927-28	Mk. 2,647	General wage statistics [1]	Skilled workers: Mk. 2,203,78 Semi-skilled workers: Mk. 1,780.95 Unskilled workers: Mk. 1,728.10
			Statistics of total wages	1927 [2]: Mk. 1,700.79 1928 [2]: Mk. 1,830.50
Denmark: Copenhagen	1931	Kr. 3,663	General wage statistics [1]	Skilled: Kr. 4,200 Unskilled: Kr. 3,384
Provinces		Kr. 2,995		Skilled: Kr. 3,384 Unskilled: Kr. 2,904
Estonia	1925	Kr. 838.42	General wage statistics [2]	Kr. 713.98
Finland	1928	Mk. 20,490	Statistics of total wages [2]	Mk. 13,396
Japan	1935-36	Y. 1,072.80	General wage statistics [1]	1935: 729.9 1936: 724.5
Norway	1927-28	Kr. 3,781.17	General wage statistics	1927: Kr. 3,711 1928: Kr. 3,507
Poland	1929	Zl. 2,645.47	General wage statistics [1]	Zl. 2,370.90
			Statistics of total wages	Zl. 1,730.83
Sweden	1933	Kr. 2,891.10	General wage statistics	Kr. 2,612.00
Czecho-Slovakia	1931-32	Kr. 10,841.65	Statistics of total wages [2]	1931: Kr. 5,597.40 1932: Kr. 5,318.82

[1] Estimates obtained by multiplication of hourly money wages, first by actual hours worked per day, and afterwards by the number of days worked per year. In case no figures were available as to the number of hours worked, a working day of 8 hours and a working year of 300 working days were assumed.

[2] Both sexes.

four groups are under-reprcsented—earth and stone, wood, leather and rubber, and building. The comparisons thus indicate that the occupational or industrial distribution of the samples covered by family budget enquiries differs very considerably from the occupational distribution of the male wage-earning population.

In Sweden, a further point is of special interest. Data are available to indicate average yearly or weekly earnings in the different industries shown in the table. It appears that the industries which are over-represented, with the exception of textiles and clothing, have higher than average wages, while those which are under-represented, with the exception of building, have lower than average wages. This tends to bear out, in part at least, the conclusion that there is a tendency for occupational groups having higher than average earnings to be over-represented in the group of families selected for study.

Other differences between the families selected for study and the whole of the population from which the sample is taken may be found by comparing, for example, the average distribution of size of family, number of children, number of wage earners, etc., in these two groups. Differences in some cases are the consequence of the policy of exclusions; in other cases, however, differences may be due to a biased sample and may be found upon analysis of the data. The possibility of such differences as a result of non-representative sampling should be tested and must be borne in mind when considering the results of the studies as representing the families of the community surveyed.

Analysis and Comparison of Results

The results of family living studies which are examined in the present article fall into three parts: receipts and income; surplus and deficit; and disbursements, outgo, and expenditure. In all cases the emphasis in the comparisons is placed on percentages rather than on the absolute amounts. Thus, in the case of income, stress is laid not on the absolute amounts of income but upon the proportions of income derived from earnings and from other sources. This is partly because of the difficulty of making useful comparisons between amounts of income or expenditure expressed in different monetary units in different countries, but mainly because this type of comparison serves an immediately useful purpose. So far as expenditure is concerned, percentages have been in fact the usual method of study of family budget data. A second article will supplement this analysis by a further study based on quantities consumed, in particular with regard to food.

Receipts and Income

Family income is derived from many sources: earnings of head of household, of wife and children, interest or dividends from investments, gifts, assistance, etc. In the long run the costs of family living must be defrayed from income. In the short run, however, current expenses may be met in other ways than from current income, by the conversion of assets or savings into cash, and by borrowing. Receipts thus include besides income these other sources of funds drawn upon to meet current expenses. Accordingly the analysis will consider first income and then "other receipts" and "receipts unaccounted for", and this will lead to a discussion of the topics of balancing the accounts, borrowings and savings, and surpluses and deficits.

Income.

Income is here taken as including in general not only money income but also the value in monetary terms of income in kind. In some enquiries, however, the latter is omitted on the ground that in the particular study the amount involved is negligible. [1]

The principal questions concerning income are the following. (1) What are the sources of income and what is their relative importance ? (2) What is the relation between income and outgo—in other words, is there a surplus or a deficit and how large is it ?

Income from earnings. Tables VI and VII show the sources of income and their relative importance in the total of current income, according to family living studies in some 20 countries. The first of these tables, table VI, analyses the principal sources of income from earnings according to whether they are derived from the employment of the head of the household, the wife, children, or other members of the family.

Earnings, as a component of income, vary within a considerable range. Both among wage earners and among civil servants and salaried employees, they constitute by far the largest element in current income. Among wage earners' families the proportion varied from 75.3 per cent. in Austria, to 97.0 per cent. in India (Ahmedabad) and 97.4 per cent. in Estonia. In five countries the proportion was less than 90 per cent. (Bulgaria, 81.7 ; Czecho-Slovakia, 83.9 ; Switzerland, 86.6 ; China, 87.3), besides Austria as already mentioned (75.3).

In salaried employees' and civil servants' families in five countries a slightly larger percentage of current income was derived from earnings than in wage earners' families, while in four countries the percentage was slightly smaller and in one country the proportions were approximately the same.

The bulk of earnings is contributed by the head of the family. The percentage of income contributed by the earnings of the head of wage-earning families varied from 53.3 per cent. in China to 90.1 per cent. in the Union of South Africa. The countries where the proportion was less than 80 per cent. included Austria, Belgium, Bulgaria, China, Colombia, Hungary, Latvia, Mexico, Poland, and Czecho-Slovakia. The reasons for low percentages may be either large sources of other income than earnings or large earnings of other members of the family, or the inclusion of families the heads of which were out of work when the study was made. If the wife or children work in order to obtain sufficient income to support the family, it is to be expected that the earnings of the head of the family will constitute a smaller proportion

[1] In all studies certain types of items—for example, the services of the housewife, which are not commonly evaluated in monetary terms—are not considered as income. Since all studies are on the same basis in this respect, there is no difficulty of comparability involved in leaving these items out of account. All the services received from the community and provided free, such as education and police protection, are thus omitted, since no values are placed on such items in monetary terms. In international comparisons of levels of living, however, differences in community services may play an important part in determining the general plane of living of the community.

TABLE VI. ANALYSIS OF EARNINGS AS A SOURCE OF CURRENT INCOME OF MANUAL AND NON-MANUAL WORKERS IN 20 COUNTRIES

Country	Date	Currency	Total current income	Percentages of income : earnings of					Other current income
				Head of household	Wife	Children	Other	Total	
				Wage earners					
Germany	1927-28	Mk.	3,251.06	82.5	4.4	4.9		91.8	8.2
Austria	1934	Sch.	3,093.32	55.6	9.5	10.2	—	75.3	24.7
Belgium	1928-29	Fr.	18,164 [1]	70.2	3.7	16.2	—	90.1	9.9
Bulgaria	1927-28	L.	41,842	71.9	4.8	3.7	1.3	81.7	18.3
China (Shanghai)	1929-30	$	416.51	53.3	12.6	13.9	7.5	87.3	12.7
Colombia	1936	Peso	616.8 [1]	67.1	10.3	15.5	2.8	95.7	4.3
Denmark (Copenhagen)	1931	Kr.	4,514	84.2	5.2	3.8	—	93.2	6.8
Estonia (Tallinn)	1925	Mk.	100,632	83.3	6.7	7.4	—	97.4	2.6
Finland [2]	1928	Mk.	25,031	84.9 [3]	4.7	3.6	—	93.2 [3]	6.8
Hungary	1929	Pengö	2,851.04	66.4	8.0	16.2	0.8	91.3	8.7
India (Ahmedabad)	1933-35	Rupee	555/12 [1]	88.1	8.7	0.2	—	97.0	3.0
Japan	1935-36	Yen	1,052.04 [1]	88.8	2.0	1.7		92.5	7.5
Latvia	1936-37	Lat	1,973.56	77.8	13.6			91.4	8.6
Mexico	1934	Peso	1,074.84 [1]	76.9	18.8			95.7	4.3
Norway	1927-28	Kr.	4,342.94	87.8	1.1	4.2	—	93.1	6.9
Poland	1929	Zl.	3,497.00	79.8	16.7			96.5	3.5
Sweden	1933	Kr.	3,493.4	86.9 [3]	2.0	2.0	—	90.9 [3]	9.1
Switzerland (Zurich)	1936	Fr.	4,923.37	81.7	4.0	0.9	0.0	86.6	13.4
Czecho-Slovakia	1931-32	Kc.	15,098.59	71.8	4.7	7.4	—	83.9	16.1
Union of South Africa	1936	£/s.	£363 6s. [1]	90.1	0.5	4.9		95.5	4.5
				Non-manual workers (S.E. = salaried employees, C.S. = civil servants)					
Germany : S.E.	1927-28	Mk.	4,531.37	90.6	0.9	2.1		93.6	6.4
C.S.			5,134.24	91.5	0.4	1.5		93.4	6.6
Belgium, S.E.	1928-29	Fr.	19,953 [1]	80.0	2.3	6.8	—	89.1	10.9
Bulgaria, C.S.	1927-28	Leva	71,001	62.1	3.6	3.2	1.2	70.1	29.9
Denmark (Copenhagen), C.S.	1931	Kr.	5,186	89.2	2.2	4.4	—	95.8	4.2
Finland [2] : S.E.	1928	Mk.	32,941	88.3 [3]	2.9	1.4	—	92.6 [3]	7.4
C.S.			54,588	83.4 [3]	9.6	0.7	—	93.7 [3]	6.3
Japan, S.E.	1935-36	Yen	1,174.20 [1]	88.2	1.0	1.0		90.2	9.8
Norway, C.S.	1927-28	Kr.	5,670.52	80.9	2.2	7.0	—	90.1	9.9
Sweden : C.S.	1933	Kr.	4,211.5	90.5	1.4	1.2	—	93.1	6.9
Middle class			7,338.5	92.0	2.2	0.1	—	94.3	5.7
Switzerland (Zurich), S.E. and C.S.	1936-37	Fr.	6,811.56	92.2	0.6	0.2	—	93.0	7.0
Czecho-Slovakia : S.E.	1931-32	Kč.	28,010.37	84.2	2.8	3.0	—	90.0	10.0
Lower officials			18,790.90	82.8	2.2	3.5	—	88.5	11.5

[1] Including small amounts in kind.

of total income than where only the head of the family is at work. At the other end of the scale, where other sources of income are large, the earnings of the head of the family may be low. This case, however, is seldom found among wage-earning families except where other sources include unemployment benefit or assistance and where wage earners who are out of work or in receipt of relief are included in the studies. In the studies considered here, unemployed families and families of persons in receipt of relief are commonly excluded.

Comparison of wage earners with salaried employees and civil servants shows that much larger proportions of total income consist of earnings of the head of the family in the last two groups. This was true in six countries—Germany, Belgium, Denmark, Sweden, Switzerland, and Czecho-Slovakia. In two countries, however—Bulgaria and Norway—the reverse was true. In one country, Japan, the two groups showed the same proportions, and in one country, Finland, the earnings of the head of the family contributed a larger proportion among salaried employees, but a smaller proportion among civil servants' families, than in the case of wage earners' families.

Earnings of the wife or mother are found to vary in wage earners' families from 0.5 per cent. in the Union of South Africa [1] to 12.6 per cent. in China. Countries with over 7 per cent. of earnings derived from this source include India (Ahmedabad), Austria, Colombia, and China. Countries with 2 per cent. or less include Japan and Sweden, Norway and the Union of South Africa.

If wage earners are compared with salaried employees and civil servants, the percentage of income contributed by the earnings of the wife is much lower for the latter in 7 countries, higher in one country, and divided in two countries.

Contributions of children's earnings range from 0.2 per cent. in India to 16.2 per cent. in Belgium. Countries with more than 10 per cent. include China, Colombia, Austria, and Hungary, in addition to Belgium. Countries with 2 per cent. or less include India, Japan, Sweden, and Switzerland.

Salaried employees and civil servants had lower proportions for children's earnings than wage earners' families, ranging from 0.1 per cent. in Sweden (middle class) to 7 per cent. in Norway.

Income from other sources than earnings. Income from other sources is derived in the main from six groups: (1) boarders and lodgers; (2) insurance, pensions, and unemployment benefits; (3) gifts and assistance; (4) income from property, including the rental value of owned home; (5) home produce; (6) other types of income.

Income from other sources (table VII) as a whole is reflected inversely in the variation of earnings from all sources. Such income varies from 2.6 per cent. in Estonia to 24.7 per cent. in Austria. With few exceptions, income from other sources does not exceed 10 per cent.; besides Austria, as already noted, Bulgaria, China (Shanghai), Switzerland (Zurich), and Czecho-Slovakia, have figures in excess of this amount. In some studies, however, detailed information is lacking

[1] The low proportion in the Union of South Africa may be influenced by the inclusion of salaried employees, etc., with wage earners.

TABLE VII. ANALYSIS OF INCOME FROM SOURCES OTHER THAN EARNINGS IN PERCENTAGES OF TOTAL CURRENT INCOME OF MANUAL AND NON-MANUAL WORKERS' FAMILIES IN 21 COUNTRIES

Country	Boarders and lodgers	Insurance benefits and pensions	Gifts, subsidies, and relief	Interest, dividends, and rent	Home produce	Other	Total sources other than earnings
			Wage earners				
Germany	0.7	2.6	3.4	0.3	0.4	0.8	8.2
Austria	3.2	19.3	1.9	—	0.3		24.7
Belgium	—	1.2	—	2.4	—	6.3[1]	9.9
Bulgaria	—	1.3	—	2.2	—	14.8	18.3
China (Shanghai)	4.6	—	3.3	—	—	4.8[2]	12.7
Colombia	—	—	—	—	—	—	4.3
Denmark (Copenhagen)	2.0	2.4	0.3	0.9	—	1.2	6.8
Estonia (Tallinn)	1.2	—	1.4	0.0	—	—	2.6
Finland	0.8	—	1.4	2.3	1.1	1.2	6.8
Hungary	2.1	—	5.8	0.3	—	0.6	8.7
India (Ahmedabad)	[3]	[3]	—	[3]	[3]	—	3.0[3]
Japan	—	0.8	5.5	0.3	—	0.9	7.5
Latvia	—	2.1	2.3	—	1.8	2.4	8.6
Mexico	—	—	4.3	—	—	—	4.3
Norway	0.8	1.3	1.0	[4]	[4]	3.9[4]	6.9
Netherlands	0.2	—	0.7[5]	1.5	0.7	1.1[5]	4.2
Poland	0.3	—	2.7	—	0.5	—	3.5
Sweden	4.9	[6]	2.3[6]	0.3[7]	0.1	1.5[7]	9.1
Switzerland (Zurich)	1.2	4.3	5.4	0.4	0.5	1.6	13.4
Czecho-Slovakia	[8]	[8]	5.3	0.4[8]	[8]	10.4[8]	16.1
Union of South Africa	1.0	—	[9]	2.9	0.1	0.5[9]	4.5
	Non-manual workers (S.E. = salaried employees, C.S. = civil servants)						
Germany S.E.	0.4	0.9	3.4	0.5	0.2	1.0	6.4
Germany C.S.	0.3	0.4	4.6	0.5	0.2	0.6	6.6
Belgium S.E.	—	0.8	—	4.5	—	5.6[1]	10.9
Bulgaria C.S.	—	4.9	—	8.2	—	16.8	29.9
Denmark (Copenhagen) C.S.	0.3	0.3	0.0	1.7	—	1.9	4.2
Finland S.E.	0.3	—	1.4	3.5	0.7	1.5	7.4
Finland C.S.	0.2	—	1.4	2.9	0.4	1.4	6.3
Japan S.E.	—	0.2	7.6	0.4	—	1.6	9.8
Norway C.S.	3.7	0.9	1.5	[4]	[4]	3.8[4]	9.9
Netherlands [5] (S.E. and C.S.)	0.6	—	0.0	1.2	0.1	0.6	2.5
Sweden C.S.	3.1	[6]	1.6	0.5[7]	0.2	1.5	6.9
Middle class	1.6	[6]	1.1	1.4[7]	0.1	1.5	5.7
Switzerland (Zurich) S.E. and C.S.	0.7	1.0	2.4	1.1	0.2	1.6	7.0
Czecho-Slovakia S.E.	[8]	[8]	3.6	0.3[8]	[8]	6.1[8]	10.0
Lower officials	[8]	[8]	3.9	0.3[8]	[8]	7.3[8]	11.5

[1] Includes family allowances. [2] Includes income from peddling. [3] Includes income from boarders and lodgers, agriculture, rent, and pensions. [4] "Other" includes home produce and rental value of owned home. [5] Income received in kind only. [6] Assistance includes insurance and unemployment benefits. [7] "Other" includes rental value of owned home. [8] "Other" includes income from boarders and lodgers, insurance, home produce, and rental value of owned home. [9] "Other" includes gifts.

as to income received from certain of these sources, and absence of detailed data may mean either that no such income was received or that if received it was differently classified —for example, as "all other"; in some cases the enquiry did not attempt to secure information on other sources of income. The possibility must always be considered, therefore, that the data for these other sources of income are incomplete, though where receipts and disbursements approximately balance the conclusion seems justified that in general these other sources of income are adequately covered. On the other hand, the conditions of the study may affect these other sources; for example, income from unemployment benefits or from relief is dependent upon and influenced by the inclusion or exclusion of unemployed persons and persons receiving relief.

The figures just given relate to wage earners. For salaried employees and civil servants, the proportion of income received from other sources was smaller than in the case of wage earners in six countries, while in four countries the reverse was true, and in one country, Finland, civil servants received less and salaried employees more from these other sources than wage earners. On the one hand, these groups of non-manual workers ordinarily receive larger sums in wages or salaries and hence do not need other sources of income—in particular, income from boarders and lodgers, and from gifts and assistance; on the other hand, in many cases, these groups have property and derive revenues from it. An examination of the detailed data may throw light upon these respective tendencies.

Income from property, including rental value of owned homes, are given for 15 countries. The amounts varied from 0.0 in Estonia to 2.9 in the Union of South Africa for the main group of wage earners. Comparing wage earners with salaried employees and civil servants, the latter had larger incomes from this source in eight of the ten countries for which this comparison can be made. In the Netherlands, one of the exceptions, the group of non-manual workers was perhaps not far different in economic status from the group of wage earners. In Czecho-Slovakia, the other exception, the difference between the two groups was negligible. The range of the percentages among salaried employees and civil servants was from 0.3 per cent. in Czecho-Slovakia to 8.2 per cent. in Bulgaria.

Boarders and lodgers provided from 0.2 per cent. of income in the Netherlands to 4.9 per cent. in Sweden, for wage-earning families. Civil servants and salaried employees reported in most cases smaller proportions of income from this source. The amount reported is often a gross (as in Sweden) rather than a net amount, on account of the difficulties of calculating the costs of the services furnished. In a sense, furthermore, all receipts from boarders and lodgers partake of the character of earnings, since they are received in general only if the housewife undertakes the management and direction of work involved in renting rooms and preparing meals. The presence of this item and the amount of income from this source are also obviously dependent upon whether the enquiry includes or excludes families with boarders and lodgers.

TABLE VIII. ANALYSIS OF OTHER RECEIPTS (GROSS AND NET PER AVERAGE FAMILY PER YEAR IN PERCENTAGES ACCORDING TO SOURCE) IN 11 COUNTRIES

Country	Date	Conversion of assets into cash					Borrowings					Currency	Total		Receipts unaccounted for
		Cash on hand	Withdrawal of savings	Loans to others returned	Other	Total	Pawnings	Wage advances	Credit purchases	Other borrowings	Total		Amount	Per cent.	
							Wage earners								
Gross															
Germany	1927-28	—	28.6	4.5	—	33.1	—	3.6	52.7	10.6	66.9	Mk.	271.49	100.0	11.33
Austria	1934	—	50.2	—	—	50.2	1.4	7.6	33.9	6.9	49.8	Sch.	114.29	100.0	8.88
Bulgaria	1927-28	4.6	3.5	0.4	2.2	10.7	—	8.7	—	80.6	89.3	Leva	2,934	100.0	68
China	1929-30	—	34.7	0.8	—	35.5	12.4	—	6.8	45.3	64.5	$	148.02	100.0	—
Estonia	1925	9.6	7.4	2.5	9.6	29.1	2.4	—	—	68.5	70.9	Mk.	6,283	100.0	1,207
Finland	1928	10.1	20.1	4.5	11.7	46.4	—	—	—	53.6	53.6	Mk.	2,913	100.0	—
Norway	1927-28	24.8	19.5	—	—	44.3	—	—	—	55.7	55.7	Kr.	138.21	100.0	—
Poland	1929	—	5.2	0.4	5.0	10.6	—	2.7	83.8	2.9	89.4	Zl.	813.01	100.0	—
Sweden	1933	13.3	59.5	3.6	5.5	81.9	—	—	—	18.1	18.1	Kr.	331.6	100.0	—
Net															
Germany	1927-28	—	41.9	9.9	—	51.9	—	2.0	32.3	13.8	48.1	Mk.	62.68	100.0	—
Netherlands	1935-36	—	72.0	—	4.6	76.6	—	—	16.1	7.3	23.4	Fl.	54.73	100.0	—
Czecho-Slovakia [1]	1931-32	30.3	11.0	—	30.3	71.5	—	—	28.5		28.5	Kč.	1,139.65	100.0	—
		Non-manual workers (S.E. = salaried employees, C.S. = civil servants)													
Gross															
Germany S.E.	1927-28	—	31.4	7.7	—	39.1	—	14.2	32.0	14.6	60.9	Mk.	687.41	100.0	11.26
C.S.		—	44.6	6.8	—	51.3	—	4.3	28.4	16.0	48.7	Mk.	1,073.13	100.0	12.99
Bulgaria C.S.	1927-28	11.6	8.9	1.8	5.0	27.4	—	3.3	—	69.3	72.6	Leva	3,535	100.0	189
Finland S.E.	1928	8.1	19.1	5.1	7.9	40.3	—	—	—	59.7	59.7	Mk.	5,021	100.0	—
C.S.		5.4	36.6	6.8	4.7	53.5	—	—	—	46.5	46.5	Mk.	8,809	100.0	—
Norway C.S.	1927-28	27.4	15.7	—	—	43.2	—	—	—	56.8	56.8	Kr.	216.37	100.0	—
Sweden	1933														
Lower officials		11.2	62.6	4.5	3.5	81.8	—	—	—	18.2	18.2	Kr.	554.9	100.0	—
Middle class		4.8	78.6	5.0	0.8	89.3	—	—	—	10.7	10.7	Kr.	1,966.3	100.0	—
Net															
Germany S.E.	1927-28	—	45.7	11.0	—	56.6	—	8.6	16.6	18.1	43.4	Mk.	169.69	100.0	—
C.S.		—	37.1	9.1	—	46.2	—	5.0	24.9	23.9	53.8	Mk.	202.14	100.0	—
Netherlands S.E. and C.S.	1935-36	—	45.6	—	5.3	50.9	—	—	32.8	16.4	49.1	Fl.	142.30	100.0	—
Czecho-Slovakia															
Lower officials	1931-32	29.8	7.3	—	22.3	59.4	—	—	40.6		40.6	Kč.	1,647.48	100.0	—
Salaried employees		31.7	16.8	—	15.3	63.8	—	—	36.2		36.2	Kč.	2,579.21	100.0	—

[1] Cash on hand and other receipts are gross.

Insurance benefits and pensions, including unemployment benefits, contributed to wage earners' incomes from 0.8 per cent. in Japan to 19.3 per cent. in Austria, of the 8 countries for which this item is shown. For the most part, except in Austria, families of unemployed persons and of persons in receipt of relief were excluded from the enquiries, and hence the proportion of income received in unemployment benefits or from assistance should be comparatively small. In practically all cases, civil servants and salaried employees receive less from this group of items than wage earners.

Gifts and assistance, in the 16 countries for which this item is shown, contributed from 0.3 per cent. in Denmark to 5.8 per cent. in Hungary to the total of current income. As just noted, in most studies persons in receipt of relief are excluded. In most countries also, as would be expected, civil servants and salaried employees received smaller proportions from these sources than wage earners; exceptions are found in Germany and Japan, and in Finland, where the percentages were the same.

Home produce, shown for seven countries, is a source of a very small proportion of income.

Other sources of income contributed from 0.3 per cent. in Austria to 14.8 per cent. in Bulgaria. Among civil servants and salaried employees the percentage of income from other sources exceeded that received by wage earners' families in five countries; it was equal in two countries and was less in four countries.

" Other Receipts ".

The term " other receipts " is used in the absence of a better designation to include a group of deficiency items which represent sums drawn from savings or borrowed to meet current expenditures.

Table VIII throws light upon the amount and source of " other receipts " in 11 countries. These are presented in two groups, the first showing the gross figure for " other receipts " and the second the net figure. The gross figure gives the sum of the individual items under each of the eight separate sub-groups, as follows: cash, withdrawal of savings, loans to others returned, other conversion of assets into cash, pawning, wage advances, credit purchases, and other borrowings, as reported by the families included in the survey. No attempt is made to deduct offsetting items. Thus, withdrawals from savings are included to the full amounts reported, even though in the same family at a different time in the year deposits were made to balance these withdrawals. With reference to cash, the item in most cases includes all cash on hand at the beginning of the year, but in a number of cases no account of cash on hand is taken at all.

The net figure gives the sum of the net amounts for each family in which each item appears, averaged over all families in the study. In other words, in each family, withdrawals from savings are offset against deposits, and the amount included here is the net total of excess of withdrawals over deposits for families in which withdrawals exceeded deposits, the whole averaged over all families; the total

" other receipts " is then the sum of the net figures in each of the eight rubrics.

On account of this diversity in method, no attempt is made to calculate the percentage which " other receipts " form of total income or total outgo.

The important question of the source of the deficiency items or the ways in which the deficits are met is answered in part by the percentages of " other receipts " which are derived from conversion of assets into cash and from borrowings. The percentage of " other receipts " derived from converting assets into cash in the case of wage earners varies from 10 per cent. in Poland and Bulgaria to 82 per cent. in Sweden. These percentages are based on gross figures. Certain differences in detail obviously affect these percentages ; for example, where cash is not included, percentages derived from converting assets into cash are reduced from what they would be if cash were included ; this element fortunately is shown in the tables by the presence or absence of the cash item. The low proportion in Poland derived from converting assets into cash appears to be related to the high proportion drawn from credit purchases. In many countries, however, no data are available on credit purchases, though they may perhaps be included in " other borrowings ". The figures are of interest for the light that they throw on the possibilities of meeting deficiencies by means of converting assets or by means of borrowing ; assets cannot be converted unless they are owned, and borrowings cannot be resorted to unless credit can be obtained ; and for wage earners both these alternatives offer difficulties.

Comparisons of wage earners with the non-manual workers (salaried employees and civil servants) show that in all cases the amounts involved are larger for the latter groups than for wage earners. The proportions drawn from converting assets into cash as compared with borrowings show conflicting trends. In Germany and Bulgaria, the salaried employees and civil servants drew larger proportions from converting assets than wage earners. In the Netherlands and Czecho-Slovakia, on the other hand, the reverse was the case, and in other countries either the evidence was conflicting or the two groups had substantially the same proportions from converting assets.

The difference between the gross and the net method of computing the " other receipts " is illustrated in the case of Germany, for which both sets of figures are available. According to the gross method, 33 per cent. of the " other receipts " were drawn from savings and converting assets into cash and two-thirds were obtained from borrowing. According to the net method, half (51.9 per cent.) was obtained from savings and converting assets into cash and only half from borrowing. In interpreting the percentage for the Netherlands it must be borne in mind that this is based upon the net method.

Receipts Unaccounted for.

The table shows also the balancing item " receipts unaccounted for ". This is merely an accounting item to cover the excess in certain budgets of outgo over income, the difference being due to error or to inadequate information.

Only for four countries is this item shown—Germany, Austria, Bulgaria, and Estonia—and its amount is negligible. The size of the item is affected among other conditions by the rules adopted in the enquiry and by the frequency and size of errors. For example, if the rule is adopted that an account is discarded entirely if outgo exceeds income by an unexplained amount of over 2 per cent., then the average size of the item " receipts unaccounted for " cannot in any case be larger than 2 per cent. The presence of such an item is evidence that the methods of the accounting system provide for such cases. The absence of the item may merely indicate that the discrepancies in the account have been included in some other item—for example, in cash or in the " other " receipts.

Net Surplus and Deficit [1]

Net surplus or deficit can be calculated in either of two ways—as the result of subtracting outgo from income or as the result of subtracting " other receipts ", including receipts unaccounted for, from " other disbursements ", including disbursements unaccounted for. Either procedure gives the same result. This is the net surplus or deficit on the average for all families in the study. In other words, for each study, a single net average balance is ascertained.

Table IX gives data of net surplus and deficit in 20 countries, together with percentages showing surplus in relation to income and deficit in relation to outgo.

It must be noted that these figures are subject to a considerable margin of error since they represent the difference between two items, income and expenditure, each of which is subject to error. Of the two, income is usually deemed to be less accurate than expenditure because, in many studies, less pains are taken to obtain an accurate account of income. On the other hand, income usually consists of relatively few items—such as earnings—which may not involve the close attention to detail that a complete account of expenditure requires. In one or two cases the figures for a country are omitted from the table [2].

Of the 20 countries given in the table, 12 show surpluses and 8 deficits. The surpluses range from 0.1 per cent. in the case of Germany to 12.0 per cent. in the case of India (Ahmedabad); the deficits range from 0.1 per cent. in the case of Austria to 9.0 per cent. in the case of Estonia (Tallinn). The high surplus in the case of India may be ascribed to the fact that nearly all the families surveyed were in debt and had to pay not only interest but also amounts on the principal, the latter,

[1] In this section the discussion of certain details of disbursements is anticipated, from the next section following.

[2] This is done in the case of Colombia, where the expenditure data relate to the month of September while the income data are given as a daily average. To obtain yearly figures from which net average surplus or deficit could be calculated would require assumptions both with regard to the number of working days in the year, for determining annual income, and with regard to the typical character of expenditure in September in relation to that in the other months, for determining annual expenditure.

TABLE IX. AVERAGE SURPLUS OR DEFICIT OF MANUAL AND NON-MANUAL WORKERS' FAMILIES IN 20 COUNTRIES

Country	Date	Currency	Income	Outgo [1]	Surplus		Deficit	
					Amount	Per cent. of income	Amount	Per cent. of outgo
Wage earners								
Germany	1927–28	Mk.	3,251.06	3,246.58	4.48	0.1	—	—
Austria	1934	Sch.	3,093.32	3,097.90	—	—	4.58	0.1
Belgium	1928–29[2]	Fr.	19,693.62[3]	20,067.02	—	—	373.40	1.9
Bulgaria	1927–28	Leva	41,842	42,425	—	—	583	1.4
China (Shanghai)	1929–30	$	416.51	454.22	—	—	37.71	8.3
Denmark	1931	Kr.	4,514	4,499	15	0.3	—	—
Estonia (Tallinn)	1925	Mk.	100,632	113,140	—	—	12,508	9.0
Finland [4]	1928	Mk.	26,592	26,815	—	—	223	0.8
Hungary	1929	Pengő	2,851.04	2,771.36	79.68	2.8	—	—
India (Ahmedabad)[5]	1933–35	Rs. a.	555-12-0	488-14-0	66-14-0	12.0	—	—
Japan[5]	1935–36	Yen	1,052.04	973.68	78.36	7.4	—	—
Latvia	1936–37	Lats	1,973.56	1,828.88	144.68	7.4	—	—
Mexico[5]	1934	Pesos	1,074.84	1,141.92	—	—	67.08	5.9
Norway	1927–28	Kr.	4,342.94	4,207.96	134.98	3.4	—	—
Netherlands	1935–36	Fl.	1,536.00	1,531.22	4.78	0.3	—	—
Poland	1929	Zl.	3,497.00	3,467.16	29.84	0.9	—	—
Sweden [4]	1933	Kr.	3,493.4	3,438.4	55.0	1.6	—	—
Switzerland (Zurich)	1936–37	Fr.	4,923.37	5,026.99	—	—	103.62	2.1
Czecho-Slovakia	1931–32	Kč.	15,098.59	14,837.38	261.21	1.7	—	—
Union of South Africa [5]	1936	£.s.	363/6/-	343/10/-	19/16/-	5.5	—	—
Non-manual workers (S.E. = salaried employees. C.S. = civil servants)								
Germany S.E.	1927–28	Mk.	4,531.37	4,558.19	—	—	26.82	0.6
C.S.			5,134.24	5,171.56	—	—	37.32	0.7
Belgium S.E.	1928–29[2]	Fr.	21,049.68[3]	21.156.48	—	—	106.80	0.5
Bulgaria C.S.	1927–28	Leva	71,001	65,645	5,356	7.5	—	—
Finland[4] S.E.	1928	Mk.	32,953	33,786	—	—	833	2.5
C.S.			50,838	51,190	—	—	352	0.7
Japan [5] S.E.	1935–36	Yen	1,174.20	1,098.24	75.96	6.5	—	—
Norway C.S.	1928	Kr.	5,670.52	5,544.70	125.82	2.2	—	—
Netherlands S.E. / C.S.	1935–36	Fl.	3,477.81	3,336.64	141.17	4.1	—	—
Sweden [4]								
Lower officials	1933	Kr.	4,211.5	4,170.8	40.7	1.0	—	—
Middle class			7,338.5	7,086.7	251.8	3.4	—	—
Switzerland S.E. / C.S.	1936–37	Fr.	6,811.56	6,969.16	—	—	157.60	2.3
Czecho-Slovakia								
Lower officials	1931–32	Kč.	18,790.09	18,430.98	359.92	1.9	—	—
S.E.			28,010.37	27,195.85	814.52	2.9	—	—

[1] Includes life insurance premiums. [2] Enquiry covering one year. [3] Derived by subtracting deficit fro outgo. [4] Data per average family. [5] Annual data calculated by the I.L.O. on the basis of figures for a shorter perio

like savings, not being included in current outgo. What appears as a surplus, therefore, is merely a sort of compulsory deduction from a meagre income of amounts for the repayment of debts. Apart from India, where this special circumstance is found, Japan with 7.4 per cent. and the Union of South Africa with 5.5 per cent. have the largest average surpluses expressed as a percentage of income.

Of the ten countries showing data for either salaried employees or civil servants or both, four show deficits and six surpluses, the deficits varying from 0.5 per cent. in the case of salaried employees in Belgium to 2.5 per cent. in the case of salaried employees in Finland, and the surpluses varying from 1.0 per cent. in the case of lower officials in Sweden to 7.5 per cent. in the case of civil servants in Bulgaria.

Disbursements, Outgo, and Expenditure

Corresponding to the distinction already made between receipts and income, a similar distinction is made between disbursements and outgo. Total disbursements must correspond exactly to total receipts; the money value of goods and services received free is included both in receipts and in disbursements.

Since the items of "other disbursements" and of "disbursements unaccounted for" are closely related in character to "other receipts" and "receipts unaccounted for" and to the analysis of surplus and deficit, it seems appropriate to discuss them briefly here before passing on to the detailed consideration of outgo and consumption expenditure.

Disbursements Unaccounted for.

To correspond to the balancing item "receipts unaccounted for" some studies enter an item "disbursements unaccounted for" where total income exceeds outgo plus "other disbursements". In other words, this item is the balancing item on the disbursement side to make the two sides of the account balance where the income side is the larger. The disbursements unaccounted for are usually small in amount for the same reasons as have been explained under receipts unaccounted for, since if they are large the account is usually rejected or special enquiries are made to correct the error.

In the table, the item "disbursements unaccounted for" appears for only three countries—Germany, Bulgaria, and Poland. The entries are negligible in amount and merely serve to indicate the care with which the accounts are analysed.

"Other Disbursements".

"Other disbursements" show the amounts devoted to savings and payment of outstanding debts from the excess of income over outgo. This corresponds as a surplus item on the expenditure side to the deficiency item of "other receipts" on the income side.

Table X gives an analysis of the gross and net amounts of "other disbursements" in nine countries, together with the percentages allocated to savings and to repayment of debts. Each of these is divided into four rubrics, savings into cash, savings and investments,

TABLE X. ANALYSIS OF OTHER DISBURSEMENTS (GROSS AND NET PER AVERAGE FAMILY PER YEAR IN PERCENTAGES ACCORDING TO DISPOSITION) IN 9 COUNTRIES

Country	Date	Conversion of cash into assets (savings)					Repayment of debts					Currency	Total		Balancing items
		Cash on hand	Savings and investments	Loans to others	Other	Total	Redemption of pawnings	Wage advances repaid	Credit purchases repaid	Other borrowings repaid	Total		Amount	Percentage	
		Wage earners													
Gross															
Germany	1927-28	—	33.6	4.0	—	37.6	—	3.4	[illegible]	8.7	62.4	Mk.	279.79	100.0	7.56
Austria	1934	—	37.8	—	—	37.8	1.0	9.1	[illegible]	15.1	62.2	Sch.	118.54	100.0	—
Bulgaria	1927-28	7.3	45.4	—	—	52.7	—	—	—	47.3	47.3	Leva	1,987.00	100.0	432
China (Shanghai)	1929-30	10.0	45.7	0.3	—	56.0	7.6	—	3.1	28.3	44.0	$	110.31	100.0	—
Finland	1928	16.4	26.9	2.2	10.4	55.9	—	—	—	44.1	44.1	Mk.	2,690.00	100.0	—
Norway	1927-28	33.5	10.4	—	—	43.9	—	—	—	56.1	56.1	Kr.	287.24	100.0	—
Poland	1929	—	4.3	0.1	6.8	11.2	—	2.6	[illegible]	3.8	88.8	Zl.	812.52	100.0	33.22
Sweden	1933	14.6	50.9	2.4	4.4	72.3	—	—	—	27.7	27.7	Kr.	386.6	100.0	—
Net															
Germany	1927-28	—	60.1	7.2	—	67.3	—	1.5	[illegible]	5.9	32.7	Mk.	70.98	100.0	—
Netherlands	1935-36	—	55.7	—	2.2	57.9	—	—	[illegible]	25.5	42.1	Fl.	59.51	100.0	—
		Non-manual workers (S.E. = salaried employees, C.S. = civil servants)													
Gross															
Germany S.E.	1927-28	—	31.7	7.4	—	39.1	—	13.4	[illegible]	13.3	60.9	Mk.	666.16	100.0	5.69
Germany C.S.	1927-28	—	45.6	6.4	—	52.0	—	4.2	[illegible]	16.0	48.0	Mk.	1,042.10	100.0	6.70
Bulgaria C.S.	1927-28	10.0	44.4	0.1	—	54.6	—	—	—	45.4	45.4	Leva	7,002	100.0	2,078
Finland S.E.	1928	10.3	34.7	2.1	7.1	54.2	—	—	—	45.8	45.8	Mk.	4,188	100.0	—
Finland C.S.	1928	6.7	41.3	4.6	3.5	56.1	—	—	—	43.9	43.9	Mk.	8,457	100.0	—
Norway C.S.	1927-28	27.8	9.5	—	—	37.3	—	—	—	62.7	62.7	Kr.	403.84	100.0	—
Sweden															
Lower officials	1933	11.2	55.7	2.7	3.9	73.5	—	—	—	26.5	26.5	Kr.	595.6	100.0	—
Middle class	1933	4.6	67.9	2.9	8.1	83.5	—	—	—	16.5	16.5	Kr.	2,218.1	100.0	—
Net															
Germany S.E.	1927-28	—	49.0	10.1	—	59.1	—	4.2	[illegible]	12.5	40.9	Mk.	148.44	100.0	—
Germany C.S.	1927-28	—	41.9	7.6	—	49.5	—	4.3	[illegible]	25.0	50.5	Mk.	171.11	100.0	—
Netherlands S.E. and C.S.	1935-36	—	83.4	—	1.1	84.5	—	—	[illegible]	12.7	15.5	Fl.	283.47	100.0	—

loans to others, and other conversion of cash into assets, and repayment of debts into redemption of articles pawned, repayment of wage advances, repayment of credit purchases, and repayment of other borrowings. The amounts are either gross or net. The gross amount includes in each rubric the total amounts reported in this rubric by all families in the study, expressed as an average for all families, the total of " other disbursements " being the sum of the items in the eight rubrics. The net figure includes in each rubric only the net amount for each family that shows a net disbursement in this rubric; for example, for each family the net savings after deducting withdrawals (which would appear as gross " other receipts ") are shown in the rubric savings and investments, the sum for all families showing a net balance in this rubric then being averaged over the entire number of families in the study. The total net figure is the sum of the net figures in the eight rubrics. [1]

Percentages in terms of total income are not shown since their size is greatly affected by the method of calculation of the gross or net disbursements.

The direction of placement of savings—whether into investments or into repayment of debts—is indicated by the percentages. Here again the differences of method are important in affecting the percentages. The percentages devoted to repayment of debts varied from 28 in the case of Sweden to 89 in the case of Poland, where repayments of purchases on credit formed the chief item. These percentages are based upon the gross figures. In the case of Germany, where both gross and net figures are shown, the net figure devoted to repayment of debts is much lower than the gross figure (33 per cent. instead of 62 per cent.). On the other hand, the percentage devoted to conversion of cash into assets varied from 11 per cent. in the case of Poland to 72 per cent. in the case of Sweden. The method of treating the cash item, however, makes some difference in these percentages, since in about half the cases cash on hand at the end of the year is included in this group, while in the other half cash is not included at all.

Outgo includes two classes of items, non-consumption outgo and consumption expenditure. Before proceeding to an analysis of consumption expenditure, which is the primary objective of family budget enquiries, the items of non-consumption outgo may be discussed briefly.

Non-Consumption Outgo.

Table XI shows for 20 countries the percentage of income spent for non-consumption outgo—taxes, interest on debts, and losses from home produce, etc., items which operate to diminish the income available for consumption expenditure.

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[1] In one country, Germany, both gross and net figures are given ; the net total amount is only about one-fourth of the gross total.

TABLE XI. PERCENTAGE OF INCOME SPENT FOR TAXES AND OTHER NON-CONSUMPTION OUTGO BY MANUAL AND NON-MANUAL WORKERS IN 20 COUNTRIES

Country	Percentage of income spent for:					
	Taxes			Interest (wage earners)	Losses from home produce (wage earners)	Total (wage earners)
	Wage earners	Salaried employees	Civil servants			
Germany	2.5	4.6	4.8	0.0	0.1	2.6
Austria	1.1	—	—	0.1	0.5	1.7
Belgium [1]	0.7	2.2	—	—	0.5	1.2
Brazil [2]	—	—	—	—	0.4	0.4
Bulgaria	1.9	—	2.6	0.0	—	1.9
China (Shanghai)	0.2	—	—	1.4	0.0	1.6
Denmark	4.2	—	5.0	0.0	0.4	4.7
Estonia	0.9	—	—	—	—	0.9
United [illegible]	[illegible]	—	—	—		[illegible]
	[illegible]	[illegible]	7.4	0.6	—	[illegible]
Hungary	0.5	—	—	0.0	—	0.5
Japan [1]	0.6	0.6	—	—	—	0.6
Latvia	0.3	—	—	—	—	0.3
Norway	7.4	—	5.1	—	—	7.4
Netherlands	2.1	8.2[4]	—	—	—	2.1
Poland	1.3	—	—	—	0.0	1.3
Sweden	6.3	6.8[5]	9.7[6]	0.2	—	6.5
Switzerland	2.5	5.0		0.1	—	2.6
Czecho-Slovakia	0.8	1.9[7]	—	0.7	0.0	1.5
Union of South Africa [1]	0.5	—	—	—	0.4	0.9

[1] Percentage based on total receipts.
[2] " " " " outgo.
[3] " " " " consumption expenditure.
[4] Non-manual workers.
[5] Lower officials.
[6] Middle class.
[7] 1.0 for lower officials.

Taxes. Taxes are a compulsory payment and, since the taxes here included are for the most part taxes on income [1], they properly form a deduction from income; in other words, they have to be paid before the family has the rest of the income for use to cover expenses. If the income tax is deducted at source, the income received is minus the tax paid. In other cases, income taxes due are often measured on the basis of the previous year's income, though paid in practice out of the current year's funds.

The range of taxes for wage earners is from practically zero in China (0.2 per cent.) to 7.4 per cent. in Norway. In general, the taxes are relatively small, except for the Scandinavian countries and Finland

[1] Other forms of taxes—namely, taxes on expenditures or on commodities—cannot usually be distinguished in budget studies, and since, even if distinguishable, such a tax is in a sense a voluntary payment associated with the purchase of a commodity it is more appropriate to consider it as part of the price.

(Denmark, 4.2; Finland, 4.1; Norway, 7.4; Sweden, 6.3). Apart from these, Germany and Switzerland (2.5) and the Netherlands (2.1) have the highest figures of the countries shown, but at a markedly lower level than the Scandinavian countries.

Table XI shows also a comparison of taxes paid in wage earners' families with taxes paid in families of salaried employees and civil servants in the same country under the same conditions. The latter groups, with presumably larger incomes, pay a much larger proportion in taxes. Except in Bulgaria, the civil servants paid from 4.8 per cent. to 9.7 per cent. (middle-class families in Sweden) of their incomes in taxes. Except in Japan, Belgium, and Czecho-Slovakia, salaried employees paid 4.6 per cent. to 8.2 per cent. In Germany, salaried employees paid twice as much as wage earners, in the Netherlands nearly four times as much, and in Czecho-Slovakia over twice as much. In Japan the percentage of income spent for taxes appears very low and the same in both groups, 0.6 per cent. All these statements, of course, apply only to the taxes directly collected and identifiable as such in the family budget studies in the several countries.

An analysis made for selected countries of the variations in the percentages spent for taxes at different income levels, both for wage earners and for salaried employees, shows in general an increasing percentage paid in taxes at higher income or social levels. A striking example is Norway, where the percentage of income paid in taxes rises from 4.3 per cent. in the group under 900 kr. expenditure per consumption unit to 6.5, 8.4, 10.1 and 11.7 per cent. in the successively higher groups of expenditure per consumption unit. In Finland, the percentage rises from 2.0 in the group under 3,750 marks expenditure per consumption unit to 3.4, 4.2, 4.7, 5.5, 6.0 and 4.8 per cent. in the successively higher groups.

The case is equally striking for salaried employees and civil servants. In Norway the rates rise from 3.6 per cent. in groups under 900 kr. to as high as 8.0 per cent. in the highest income class. It is perhaps noteworthy that in Norway in each income group less is paid in taxes by civil servants than by wage earners. In most cases—for example, in the Netherlands, Japan, and Germany—the percentages paid in taxes by salaried employees or civil servants exceed those paid by wage earners in the same income group.

In practically all cases the proportion spent for taxes is lowest for the lowest income group. An exception is found in the case of salaried employees in Japan, who paid a larger proportion in taxes at lower than at higher income levels; in this case the trend appears regressive. For wage earners in Japan and Czechoslovakia the percentage spent for taxes seems to be about stationary, except for the lowest income group.

Interest on debts. Interest on debts is a minor item in this group of deductions which represent a diminution of income. The only kind of interest here considered is interest on (unsecured) personal debts. Interest on a mortgage on the home or on other property, or on amounts borrowed on income-producing security, is entered as a deduction from the income derived from the particular property concerned or,

in the case of an owned home, as a deduction from the money value of the rental (on the income side, but not on the expenditure side), and the amounts entered as income are the net amounts after the deduction of interest and other expenses. In most studies, interest on personal debts is negligible, but in India (Ahmedabad and Bombay) it forms a considerable item, since practically every family is in debt. [1]

In the budget enquiries shown in the table, the percentage of income spent for interest varied from less than one-twentieth of 1 per cent. in Germany, Bulgaria, and Denmark, to 1.4 per cent. in China (Shanghai).

Losses from home produce, etc. "Losses from home produce" represents a necessary deduction from income before determining amounts available for consumption. In the usual case, operations such as gardening, poultry raising, etc., yield a net income which appears on the income side of the account. In the exceptional case where the operations result in a net loss, the appropriate place for the entry is as an item of non-consumption outgo.

In the countries for which this information is available (table XI) the losses from home produce range from less than one-twentieth of 1 per cent. for China, Poland, and Czecho-Slovakia, to 0.5 per cent. for Austria and Belgium ; in other words, the amounts are negligible.

Consumption Expenditures

Table XII shows the proportionate expenditures for the four principal groups of items in the budget—food, housing, clothing, and miscellaneous, for wage earners in 25 countries. Before proceeding to a discussion of these percentages and their significance, certain preliminary explanations should be made.

In the first place, the base upon which these percentages have been calculated is, so far as possible, uniform and is the sum of the current consumption expenditure. In particular, savings, repayment of debts, taxes, and all balancing items, are disregarded in this total ; an attempt is thus made to limit the base to the money value of current living, as the most satisfactory basis for international comparisons.

In the second place, each of the individual groups has been treated so far as possible in a uniform manner. This is a more difficult proceeding since the variations in detailed classifications are numerous and often important. However, for certain items the data are approximately comparable. In particular, the food group excludes tobacco, but includes drinks and cost of meals outside the home. Housing, which is shown subdivided into rent, fuel and light, and furniture, upkeep, and equipment, is a less satisfactory group than food so far as uniformity is concerned. Rent as a subgroup is relatively constant in meaning from country to country, though in detail many difficulties appear in regard to the rent of furnished apartments and the inclusion or exclusion of the cost of heating, lighting, etc. A special difficulty

[1] These disbursements for interest are not consumption expenditures but are usually the aftermath of a previous expenditure on consumption or of special expenditures such as a marriage festival.

TABLE XII. ANALYSIS OF WAGE EARNERS' AND NON-MANUAL WORKERS' EXPENDITURES ACCORDING TO PRINCIPAL GROUPS OF EXPENDITURE IN 25 COUNTRIES

Country	Date	Food	Housing				Clothing	Miscellaneous	Total consumption expenditure
			Rent	Furniture, upkeep, & equipment	Fuel and light	Total			
	Wage earners								
Germany	1927–28	46.6	10.6	4.1[1]	3.8	18.5	13.5	21.4	100.0
Argentina	1935	54.9	18.7	—	4.1	22.8	10.3	12.0	100.0
Austria	1934	50.3	7.7[2]	2.7	5.6	16.0	9.8[1]	23.9	100.0
Belgium	1928–29	59.6	6.4	2.9	5.0	14.3	15.8	10.3	100.0
Brazil	1934	48.3	21.3	—	4.1	25.4	10.1	16.2	100.0
Bulgaria	1927–28	50.2	13.8	2.9	6.2	22.9	12.8	14.1	100.0
China (Shanghai)	1929–30	55.8	8.5	1.4	6.5	16.4	7.4	20.4	100.0
Colombia	1936	63.9	17.9[3]	—	6.2[4]	24.1	1.3	10.6	100.0
Denmark (Copenhagen)	1931	37.5	15.1	6.1	3.9	25.1	11.3	26.1	100.0
Estonia (Tallinn)	1925	59.0	13.4	1.2	—[5]	14.6	15.9	10.5	100.0
United States (New York City)	1934–36	36.7	21.1	2.6	4.9	28.6	11.1	23.6	100.0
Finland	1928	50.5	13.0	4.6	4.1	21.7	12.2	15.6	100.0
Hungary	1929	52.9	10.4	1.9	5.7	18.0	10.2	18.9	100.0
India (Ahmedabad)	1933–35	49.3	11.0[6]	0.4	6.6	18.0	9.1	23.6	100.0
Japan	1935–36	38.5	13.6	2.8	4.9	21.3	11.3	28.9	100.0
Latvia	1936–37	40.0	19.4	4.4	—[5]	23.8	12.0	24.2	100.0
Mexico	1934	56.4	9.7	9,5		19.2	6.6	17.8	100.0
Norway	1927–28	47.1	12.7	3.1	5.3	21.1	13.4	18.4	100.0
New Zealand	1930	29.5	21.9	1.5	6.2	29.6	12.6	28.3	100.0
Netherlands	1935–36	40.1	15.8	3.7	5.7	25.2	9.0	25.7	100.0
Poland	1929	57.2	4.1	3.6	4.8	12.5	17.3	13.0	100.0
Sweden	1933	40.2	14.7	5.7	4.4	24.8	14.0	21.0	100.0
Switzerland (Zurich)	1936–37	35 2	23.7	3.2	5.4	32.3	9.6	22.9	100.0
Czecho-Slovakia	1931–32	54.7	6.3	3.9	6.0	16.2	13.4[1]	15.7	100.0
Union of South Africa	1936	32.8[7]	24.3[8]	1.8	4.7	30.8	10.3	26.1	100.0

[1] Including bedding. [2] Including repairs. [3] Including light. [4] Fuel only. [5] Included in rent. [6] Including municipal taxes. [7] Excluding drinks. [8] Including rates.

is the rental value of the home when it is owned by the occupant. In cases of owned homes the rental value belongs under rent. Furniture, upkeep, and equipment, is the least satisfactory of the three subgroups under housing. The item for furniture especially is apt to be unsatisfactory since it may include only expenses for furniture in the given year and may not correspond at all to the actual rental value of the furnishings and furniture owned. In some countries, furthermore, items that might properly be classified with this group are included under miscellaneous.

Clothing is a reasonably uniform classification, the principal difficulty being the inclusion or exclusion of cleaning. Laundry, especially laundry done outside the home, is included so far as possible

TABLE XII. ANALYSIS OF WAGE EARNERS' AND NON-MANUAL WORKERS' EXPENDITURES ACCORDING TO PRINCIPAL GROUPS OF EXPENDITURE IN 25 COUNTRIES *(cont.)*

Country	Social class	Food	Housing				Clothing	Miscellaneous	Total consumption expenditure
			Rent	Furniture, upkeep, & equipment	Fuel and light	Total			
	Non-manual workers (S.E. = salaried employees, C.S. = civil servants)								
Germany	S.E.	36.7	12.8	6.1[1]	3.9	22.8	14.0	26.5	100.0
	C.S.	35.5	13.2	7.0[1]	4.1	24.3	15.4	24.8	100.0
Belgium	S.E.	51.0	12.1	4.5	5.5	22.1	15.8	11.1	100.0
Bulgaria	C.S.	39.6	15.9	4.5	5.1	25.5	14.2	20.7	100.0
Denmark (Copenhagen)	C.S.	34.9	17.1	3.5	4.1	24.7	12.6	27.7	100.0
Finland	S.E.	41.1	15.9	4.7	3.9	24.5	13.3	21.1	100.0
	C.S.	29.3	15.4	6.5	3.9	25.8	13.0	31.9	100.0
Japan	S.E.	33.3	15.0	3.1	5.2	23.2	11.7	31.7	100.0
Norway	C.S.	43.2	12.6	5.2	5.0	22.8	15.1	18.9	100.0
Netherlands	Non-manual workers	22.8	13.6	4.8	4.6	23.0	9.9	44.3	100.0
Sweden	Lower officials	35.4	16.7	5.8	4.4	26.9	14.3	23.4	100.0
	Middle class	26.5	17.5	6.8	4.2	28.5	14.0	31.0	100.0
Switzerland (Zurich)	S.E. and C.S.	29.1	23.6	4.2	5.6	33.4	10.2	27.3	100.0
Czecho-Slovakia	S.E.	39.5	9.1	6.5	4.9	20.5	16.5[1]	23.5	100.0
	Lower officials	47.9	7.1	5.4	5.8	18.3	16.7[1]	17.1	100.0

[1] Including bedding.

under clothing, but in some studies it appears under miscellaneous.

With this preliminary explanation we proceed to an analysis of the proportionate expenditures.

Food. The proportion of total expenditure which went for food varied from 29.5 per cent. in New Zealand to 63.9 per cent. in Colombia. If the countries are divided into seven groups corresponding to percentages of under 35, 35-40, 40-45, 45-50, 50-55, 55-60, and 60 and over, only two countries are found in the group under 35 per cent.—namely, New Zealand and the Union of South Africa [1]. In the second group, the United States (New York City), Denmark (Copenhagen), and Japan, Latvia and Switzerland (Zurich), are found; in the third group, 40-45, are the Netherlands and Sweden; in the fourth group, 45-50, Germany, Brazil, India (Ahmedabad), and Norway; in the fifth group, 50-55, Argentina, Austria, Bulgaria, Finland, Hungary, and Czecho-Slovakia; in the sixth group, 55-60, Belgium, China

[1] It should be noted, however, that in these two countries the data cover non-manual workers' families as well as those of wage earners.

(Shanghai), Estonia (Tallinn), Mexico, and Poland; in group 7, 60 and over, the only country included is Colombia.

These percentages depend in general upon the urgency of food needs in the several countries as compared with other needs, but in part they may be influenced by the special conditions of the investigation. [1] The position of Japan in the second group seems much lower than would be expected, and is to be explained, perhaps, as a consequence of the national habit of limiting food expenditure to the simplest and cheapest food, principally rice, and thus leaving the budget, even though on a low scale, relatively free for other types of expenditure.

Perhaps in any classification of countries in relation to the proportion spent upon food the countries of the Far East—India, Japan, and China, should be treated in a separate group. For these countries it is especially difficult to make comparisons with the situation in European countries. The differences in the proportions spent for food in these Far-Eastern countries do not bear the same relation to adequacy of diets or do not indicate the same conclusion with regard to the quality of diets as would be found in the case of European countries. This point needs further analysis in connection with the detailed examination of the quantities of foods purchased and the calorie and mineral and vitamin content of the diets in relation to the number of consumption units.

The further point should be noted, moreover, that these percentages of food expenditure are averages and that, as will be shown subsequently, wide variations are found in this percentage as income changes. Hence, the average itself may be influenced by the general income conditions of the wage earners in the country considered and the particular income groups from which the families have been drawn.

In the same table a comparison is given between the proportion spent on food among wage earners' and among salaried employees' and civil servants' families. In general, much smaller proportions are found among the two groups last mentioned. In Germany, for example, the proportion of 46.6 per cent. found for wage earners' families drops to 36.7 per cent. for salaried employees and to 35.5 per cent. for civil servants. In Finland, the corresponding decrease is from 50.5 per cent. for wage earners to 41.1 per cent. for salaried employees and to 29.3 per cent. for civil servants. Likewise in Japan the salaried employees spent a smaller proportion for food than the wage earners, 33.3 per cent. compared with 38.5 per cent. The lowest percentage for any of

[1] For example, the high percentage for Colombia, depends in part upon the extraordinarily low expenditure for clothing, which is due to the fact that the budget was taken for the month of September, when expenditures for clothing are very low. Had the expenditure for clothing in Colombia been, say, at an average level, perhaps 13 per cent., instead of 1.3 per cent., and all other items remained the same, the proportion of expenditure for food would have been reduced from 63.9 to 57.1 per cent. Colombia would still have ranked among the countries with the highest proportion spent on food, but it would not have been quite so far above the level shown by the other countries.

the classes and countries shown in the table was 22.8 per cent. for non-manual workers in the Netherlands.

An examination of the trend of percentages in different income groups for wage earners shows a general tendency for the percentage expended for food to diminish as income per family increases, though this tendency is less marked for the low income groups when the food percentages are high. The range of incomes shown is in general about 100 per cent.—that is, the lower limit of the highest class is in general about twice as high as the upper limit of the lowest class. In Germany and New Zealand the range as thus measured is proportionately less, the highest figure being only about 1.7 times the lowest. In Austria it is three times, in Bulgaria 2.7 times, in Denmark and China (Shanghai) 2.3 times, in India 4.5 times, and in South Africa 4.6 times. In general it might be expected that where the range is greatest the variation in the percentage spent for food would also be greatest. Thus, in South Africa the percentage spent for food falls from 43.1 per cent. in the group " less than £125 " to 31.8 per cent. in the group " £575-£600 "; but in India the percentage remains fairly constant, though income quadruples. In Austria the decrease is from 60.5 in the group " less than 2,000 schillings " to 43.5 in the group " 6,000 schillings and over ". In Bulgaria, the percentage drops from 56.0 per cent. (less than 36,000 leva) to 35.6 per cent. (96,000 leva and over), where income considerably more than doubles. In a few countries the decrease is relatively slight. Besides India, where practically no change is observed, in Germany the decrease is only from 48.5 to 43.5 per cent. though the income doubles, in Switzerland from 37.3 to 33.8, with a doubling of income, and in Denmark from 45.7 to 39.6 per cent. though the income more than doubles.

Turning to the salaried employees and civil servants, a striking extension of the percentage trends already found is to be noticed. Thus for Germany, where the percentages fell very little for the wage-earner groups, the proportion of 42.8 per cent. for salaried employees of the lowest group (under 3,000 marks) is less than that for the wage earners of the highest group (4,300 and over) and diminishes by more than one-third, to 30.9 per cent., for the group " 6,100 marks and over ". For the civil servants, moreover, the decrease is even more striking, from 46 per cent. in the group " less than 3,000 marks " to only 28.7 per cent. for the group " 10,000 marks and over ". Similarly for Switzerland, the decrease in the percentage spent for food is from 36.1 per cent. in the group " less than 4,000 francs " to 25.7 per cent. in the group " over 10,000 francs ".

Within the same class the influence of increased income is thus striking. This is also evident in the case of the Netherlands, where the percentage spent for food decreases to 14.1 per cent. for non-manual workers with incomes of 6,000 florins and over.

With regard to differences between classes within the same per-family-income group, the evidence indicates a difference between wage earners and the other two classes; for example, in Germany in the same income group " 3,600 to 4,300 marks " wage earners spent 45.8 per cent., salaried employees 39.8 per cent., and civil servants

41.7 per cent., for food. For the group " 4,800 to 5,100 marks " the percentages were respectively 43.5, 37.2, and 38.9. In Bulgaria the salaried employees show lower percentages spent for food in each income class than the wage earners. The same is found for Denmark, Japan, the Netherlands, Switzerland, and Czecho-Slovakia.

So far as these differences are concerned, attention should be called to one point—namely, that these figures are classified according to income per family, and the salaried employees and civil servants may have smaller families than wage earners at the same income level, and hence may not have to spend so large a proportion on food as the wage earners. With a higher income per family, the corresponding relationship is not so clear; in so far as the number of wage earners in the family is not changed, the higher-income families might be expected to have a smaller number of members, and hence the requirements for food would be a smaller proportion of the budget. On the other hand, if the higher income per family is due to a larger number of wage earners in the family, this tendency would not be so marked.

The analysis permits a further refinement in the case of certain countries—namely, classification according to income per consumption unit. In this classification the variation in size of family is taken into account and the relation between the percentage expenditures on food and the effective economic level is more clearly shown.

Thus, in Germany, for wage earners the percentage spent for food decreased from 45.9 per cent. (income less than 800 marks per unit) to 36.8 per cent. (income 1,500 marks and over per unit), while the percentage fell to 25.5 per cent. for salaried employees (2,200 marks and over per unit) and to 19.7 per cent. for civil servants (3,100 marks and over per unit).

Housing. The group of housing includes three subgroups, rent, fuel and light, and furniture, upkeep, and equipment. Each of these will be discussed in turn, before considering the data for the group as a whole.

The range of the average percentages spent for *rent* is very considerable, from 4.1 per cent. in Poland to 24.3 per cent. in the Union of South Africa, the latter figure being nearly six times the former. Countries with unusually low rents include (besides Poland) Czecho-Slovakia, Belgium, Austria, and China. Countries with unusually high proportions spent for rent include Colombia, Argentina, Latvia, the United States, Brazil, New Zealand, Switzerland (Zurich), and the Union of South Africa. So far as the countries of the Far East are concerned, Japan had the highest proportion (13.6 per cent.); India came next (11.0 per cent.), and China lowest (8.5 per cent.). All these figures relate to wage earners' families.

Comparing wage earners' families with salaried employees' and civil servants' families, with one or two exceptions the percentages spent on rent in the first group are lower than in the other two groups. In Germany, for example, the percentages in the three groups are 10.6, 12.8, and 13.2, respectively. In Belgium, where the wage earners spent an unusually low proportion for rent, 6.4 per cent., the salaried employees spent nearly twice as much, 12.1 per cent. In Norway

and Switzerland (Zurich) the percentages were approximately the same, while in the Netherlands the non-manual workers spent rather less than the wage earners.

When these percentages are analysed according to income groups, in almost every case as income increased the percentage spent for rent diminished. In Bulgaria, however, the contrary was found. In that country as income increased the percentage spent for rent increased from 12.3 per cent. in families of wage earners receiving less than 36,000 leva to 18.7 per cent. in families of wage earners receiving 96,000 leva and over. As regards other countries, the decrease in the percentage spent for rent as income increased might be termed slight in Belgium, China (Shanghai), New Zealand, and South Africa, moderate in Estonia, India, Japan, Mexico, Germany, the Netherlands, Switzerland, and Czecho-Slovakia, and rapid in Austria and Denmark. In Austria, as income tripled the percentage spent for rent fell from 11.9 per cent. in the income group " less than 2,000 schillings " to only 4.6 per cent. in the income group " 6,000 schillings and over ". In Denmark, as income somewhat more than doubled, the percentage spent for rent decreased from 22.9 per cent. in the group " 2,000 to 3,000 crowns " to 9.5 per cent. in the group " 7,000 crowns and over ". All these percentages relate to wage earners.

Among the salaried employees and civil servants there was a general tendency for the proportions spent on rent to diminish as income increased. In Germany, however, the decrease was relatively slight for salaried employees and irregular in the case of civil servants. In Bulgaria, where among wage earners the proportion spent on rent increased, among the civil servants the proportion was practically constant. In the Netherlands the decrease in the proportion spent on rent was much more rapid among the non-manual workers than among manual workers.

When income is considered in terms of consumption units, all the percentages and trends appear much more constant. The data are available in this form for only six countries. In Germany, the trend for each group, wage earners, salaried employees, and civil servants, is slightly downwards. In only one instance—that of civil servants in Finland—can the downward trend be called substantial. In the case of wage earners and lower officials in Sweden the trend appears slightly upward, while in Norway the trend is downward at first and then upward as the income per consumption unit increases.

The expenditures for *fuel and light* show a relatively small range, varying from 3.8 per cent. in Germany to 6.6 per cent. in India.

The differences between wage earners, salaried employees, and civil servants, are relatively slight. In about half the countries considered, salaried employees and civil servants spent on the average a slightly higher proportion than wage earners, and in about half the cases a slightly smaller proportion. This may possibly be due in part to differences in the meaning of the term rent—whether it includes, for example, the cost of heating or of hot water in the case of salaried employees and civil servants and omits such items in the case of wage earners.

When the figures are analysed according to income per family, all groups and countries show a diminishing proportion spent on fuel and light as income increases. In many cases the decrease in the percentages was marked—for example, in Austria, where the percentage diminished from 8.8 per cent. in the lowest income class to 3.7 per cent. in the highest, and in Denmark, where it diminished from 4.7 per cent. in the lowest to 2.3 per cent. in the highest. Similar sharp decreases are found in Czecho-Slovakia and the Union of South Africa. In other cases, however, the diminution is much less, as in Bulgaria, where the range was from 6.9 per cent. to 5.4 per cent., and in New Zealand, where it fell from 6.2 per cent. only to 5.6 per cent. All these percentages relate to wage earners' families.

Among the salaried employees' and civil servants' families the diminution in most cases was much less rapid as income increased than in the case of wage earners. In the Netherlands, however, for non-manual workers, the percentage fell from 7.4 per cent. in the lowest income group to 3.5 per cent. in the highest. In the case of Switzerland, the trend appears almost horizontal.

In terms of income per consumption unit all the percentages show decreases as income per consumption unit increased. In general these trends show a much more moderate fall than those in terms of income per family. In one or two cases, as in Norway and Sweden, there is practically no difference in the proportion expended on fuel and light in the different income-per-consumption-unit classes.

The expenditures for *furniture, upkeep, and equipment*, are relatively irregular and are small in amount. In the 21 countries for which figures for expenditure on furniture, upkeep, and equipment, are given, the range was from 0.4 per cent. in India to 6.1 per cent. in Denmark. All the Scandinavian countries appear to have had high proportions for this group of items (5.7 per cent. in Sweden, 4.6 per cent. in Finland, and 3.1 per cent. in Norway). Non-Scandinavian countries with higher percentages than Norway include Czecho-Slovakia (3.9 per cent), Germany (4.1 per cent.), Latvia (4.4), Poland (3.6), Switzerland (3.2), and the Netherlands (3.7). To some extent these percentages may depend on the methods of conducting the study, in that the rules for including these items may affect the percentages.

Salaried employees and civil servants in practically all cases spent more for this group of items than wage earners, the sole exception being Denmark, where the wage earners spent 6.1 per cent. and the civil servants only 3.5 per cent. In most cases, however, the differences between the two groups were not great.

On analysis by income classes, in practically every case a larger proportion went for furniture and furnishings in the highest income groups than in the lower. In some cases the increase in the percentage was very rapid. For example, in Austria the percentage rose from 0.6 per cent. in the lowest to 4.6 per cent. in the highest income group. In other cases, however, the increase was slight, as in South Africa and Denmark. In the case of India the trend appeared slightly downwards, though with irregularities.

In terms of income per consumption unit, the trend of the percentage spent for furniture and furnishings is upwards in all five countries for which figures are available in this form. In general it shows a much more rapid rate of increase than when the figures are analysed by income per family. In Finland, for example, for wage earners' families the percentage rose from 1.7 in the lowest to 9.2 in the highest income-per-consumption-unit group.

Clothing. Expenditures for clothing by wage earners' families show a wide range in different countries. Omitting Colombia, where the study was limited to a single month (September) when few expenditures for clothing were made with the result that the percentage spent for clothing was only 1.3, the range was from 6.6 in Mexico to 17.3 per cent. in Poland. Three-fourths of the countries fall within the narrow range between 9 and 14 per cent. These include the Netherlands, India, Switzerland, Austria, Brazil, Hungary, Argentina, the Union of South Africa, the United States, Denmark, Japan, Latvia, Finland, New Zealand, Bulgaria, Norway, Czecho-Slovakia, Germany, and Sweden. Countries with higher proportions include Belgium (15.8), Estonia (15.9), and Poland (17.3). Countries with lower proportions include Mexico (6.6) and China (7.4).

These percentages are difficult to compare between countries without reference to the actual amounts available for expenditure, the climatic conditions affecting the requirements for clothing, and the relative cost of the prevailing type of garments adapted to these conditions.

Comparing wage earners and other classes within the same countries, the proportions were slightly lower in general for wage earners than for salaried employees and civil servants. In most cases, however, the difference was not great. Thus, in Germany the percentages for the three groups were 13.5, 14.0, and 15.4; in Finland, 12.2, 13.3, and 13.0; in Sweden, 14.0, 14.3 [1], and 14.0 [2], respectively.

Analysing the figures according to income classes, the percentage expenditures for clothing increase considerably as income increases (with the exception of India, where the percentage shows a downward trend). The increase varies from roughly 50 per cent. in the proportion spent for clothing in wage earners' families in Germany as income doubles to 200 per cent. in Austria as income triples. In Switzerland, the increase in the proportion spent for clothing in the wage earners' families as income increased was very slight. The same is true in general of the Union of South Africa, and Denmark, except that the percentage at the lowest income level was very low.

In a few cases after the income reaches a relatively high level the proportion of expenditure for clothing diminishes. This is found in the families of civil servants in Germany above the level of 4,300-5,100 marks, and in Denmark above the level of 3,000-4,000 kr. Whether a decreasing percentage in the highest income classes is generally to be expected cannot be determined on the basis of the

[1] Lower officials.
[2] Middle class.

data here available, since in general the higher income classes are not well represented in the surveys summarised here.

When the data are analysed according to income per consumption unit, which is possible in the case of six countries, the percentages spent for clothing do not show as marked changes as under analysis according to income per family. In the case of wage earners in Finland, Norway, and Poland, there is a slight increase in the percentage spent for clothing as income per unit increases. For civil servants and salaried employees the proportion spent for clothing diminishes as income per unit increases—in Germany, very markedly in the case of civil servants; the same is true of civil servants in Finland and wage earners and lower officials in Sweden; in the case of the middle class in Sweden the trend of the percentages is upward, while in other cases the trend is horizontal, indefinite, or irregular.

Miscellaneous. In the field of miscellaneous expenditures are found the greatest variations in the percentages. In part these may depend upon differences in definition—for example, as regards cleaning, insurance, etc., as discussed below.[1] In the main, however, the varying proportions spent on miscellaneous items reflect the varying degrees of urgency of other expenditures. In wage earners' families the average percentage spent for miscellaneous items ranges from 10.3 in Belgium to 28.9 in Japan. If the countries are grouped according to the percentage of expenditures for miscellaneous items into the classes 10 to 15, 15 to 20, 20 to 25, and 25 and over, the result is as follows. In the lowest group are found Belgium (10.3), Estonia (10.5), Colombia (10.6), Argentina (12.0), Poland (13.0), and Bulgaria (14.1). In the next group come Finland (15.6), Czecho-Slovakia (15.7), Brazil (16.2), Mexico (17.8), Norway (18.4), and Hungary (18.9). In the group next to the highest come China (20.4), Sweden (21.0), Germany (21.4), Switzerland (22.9), the United States and India (23.6), Austria (23.9), and Latvia (24.2), while the highest group includes the Netherlands (25.7), the Union of South Africa and Denmark (26.1), New Zealand (28.3), and Japan (28.9).

Comparing wage earners and non-manual workers, sharp differences are found in the percentages spent on miscellaneous items between wage earners' families and families of salaried employees or civil servants. Perhaps the most striking illustration is found in the Netherlands, where the percentage rose from 25.7 for wage earners to 44.3 for non-manual workers. Considerable differences in the proportion are found in Czecho-Slovakia (15.7 and 23.5 per cent.), in Bulgaria (14.1 and 20.7 per cent.), and in Finland (15.6 and 31.9 per cent.). On the other hand, in a few countries comparatively little difference in the percentages appears. Thus in Belgium the percentage for wage earners was 10.3 and for salaried employees only 11.1, and in Norway the percentage for wage earners was 18.4 and for civil servants 18.9.

When the figures are analysed according to different income classes a marked relationship is found between an increase in the percentages

[1] Taxes are excluded from miscellaneous and are discussed above, p. 688.

spent on miscellaneous items and the increased income. In all cases, as income increased the percentage spent on miscellaneous items increased. The rapidity of increase, however, varied considerably in the different countries. In Germany, for example, as the income of wage earners approximately doubled the percentage spent on miscellaneous items increased only 10 per cent. In Austria as the income tripled the percentage spent on miscellaneous items more than doubled. In Belgium as income doubled the percentage spent on miscellaneous items doubled. In general it is not surprising to find an increase of 50 to 100 per cent. in the percentage spent on miscellaneous items among wage earners as income increases from the lowest to the highest income class. Perhaps the most striking cases are those of South Africa, where the percentage spent on miscellaneous items increased nearly two and a half times while the income increased five times, and the Netherlands, where the percentage spent on miscellaneous items increased 2.2 times while the income increased fourfold.

The increasing importance of miscellaneous items in expenditure is likewise marked when wage earners are compared with salaried employees and civil servants. In Germany, where the increase in percentages spent on miscellaneous items as income increased was relatively low for wage earners, it appears relatively great for the civil servants, rising from 16.4 per cent. in the income group " less than 3,000 marks " to 36.8 per cent. in the income group " 10,000 marks and over ". For non-manual workers in the Netherlands the percentage rose from 28.9 in the lowest income group to 58.2 in the highest.

Comparing the percentages at the same income levels for wage earners, salaried employees, and civil servants, the percentage spent for miscellaneous items is seen to be somewhat greater for salaried employees and civil servants than for wage earners. Thus in the case of Germany in the income class " 3,000-3,600 marks " the percentages in the three groups were 21.2, 23.5, and 17.1. In the income group " 3,600-4,300 marks " the percentages were 21.9, 24.9, and 18.3. Though the civil servants have the lowest proportions for miscellaneous items in these two groups, they showed the highest proportion as the income increased.

This might be interpreted in the sense that the standard of living of the civil servants in respect of food and other items is relatively higher or more " imperative " than in the case of other groups. In consequence if the income is low an extremely low proportion is left for miscellaneous items after the standard of living of that group for food, housing, and clothing, is relatively satisfied.

The figures just presented are based on income per family. For six countries analysis is possible according to income per consumption unit. When this basis is taken, a much more marked increase in the percentage of expenditure on miscellaneous items appears as the economic level rises. For example, for wage earners in Germany, for whom, when the data are analysed by income per family, a comparatively small increase in the percentage spent on miscellaneous items—about 10 per cent. as the income doubled—is shown, the

increase is from 21 per cent. for the income-per-consumption-unit group " less than 800 marks " to 30 per cent. in the income-per-consumption-unit group " 1,500 marks and over ", or 44 per cent. as the income as measured by the new grouping approximately doubles. In the case of wage earners in Finland, the percentage spent on miscellaneous items increased from 10.1 to 25.8 per cent., or 150 per cent. as income tripled ; for salaried employees in the same country, the increase from 8.4 per cent. to 30.5 per cent. represents an increase of 260 per cent. as income triples.

Details of expenditure on miscellaneous items are shown in table XIII for 13 separate groups in the form of percentages based on the total consumption expenditure of all types. It must be borne in mind that in some cases differences in the scope of a group may help to explain differences in the percentages expended. Such differences, while they may account for variation between countries, do not affect conclusions in the same country between different social or income groups.

Insurance of all kinds, except life insurance [1], old-age pensions, etc. (15 countries), showed percentage expenditures which varied from 1.1 per cent. in Finland to 7.2 per cent. in Germany.

Contributions, including trade union dues and contributions to similar organisations, etc. (17 countries), varied from 0.1 per cent. in Bulgaria to a maximum of 3.7 per cent. in Denmark. In only five countries did the proportion exceed 1.0 per cent.—2.3 per cent. for the Netherlands and Sweden, 2.4 per cent. for Germany, 3.4 per cent. for Norway, and 3.7 per cent. for Denmark. The high percentages in the Scandinavian countries may be due either to a general similarity of conditions in these countries, where such contributions are part of the usual expenditures, or perhaps to similarity of definition of " contributions " in the family budget studies in these countries, where the term may cover more than is included elsewhere.

In some cases *cleaning* is grouped partly with housing and partly with clothing. Percentage expenditures (13 countries) varied from 0.6 per cent. in China (Shanghai) to 2.7 per cent. in Estonia and the Union of South Africa.

Data for *travel and transport* are available in 22 countries. The percentage ranges from 0.7 per cent. in Estonia to 5.1 per cent. in the United States (New York City). The countries with percentages higher than 2 per cent. include Norway and Switzerland (Zurich) (2.1), Japan (2.2), Austria (2.3), Brazil (2.5), Colombia and Hungary (2.7), Sweden (3.1), India (3.3), New Zealand (3.5), Argentina (3.7), South Africa (3.8), Denmark (3.9), Latvia (4.4), and the United States (5.1) ; the lower ranges include, besides Estonia, Bulgaria (0.8), Czecho-Slovakia (1.0), Poland (1.1), China (1.2), and Germany (1.3).

Data of expenditures for *education, newspapers, etc.*, are available for 23 countries. The percentage spent varied from 0.2 in Brazil to 4.7 in Latvia. Among the countries with low proportions were China and the United States (0.3). Countries with percentages of 2 and over

[1] Life insurance is included with savings wherever the basic data permit.

TABLE XIII. ANALYSIS OF EXPENDITURE ON MISCELLANEOUS ITEMS IN PERCENTAGES OF TOTAL EXPENDITURE OF MANUAL AND NON-MANUAL WORKERS' FAMILIES IN 24 COUNTRIES

Country	Insurance (excluding life)	Contributions	Cleaning and washing	Transport	Education (and newspapers)	Hygiene and personal care	Medical care	Recreation and amusements (including sport and radio)
	Wage earners							
Germany	7.2	2.4	—	1.3	2.1	0.8	0.7	2.1
Argentina	—	0.6[1]	1.1	3.7	0.5	0.2	2.0	0.1
Austria	5.1[2]	—	2.3	2.3	1.9	0.6	2.5	2.7
Belgium	—	—	—	—	4.0	1.3		5.0
Brazil	—	0.5	—	2.5	0.2	—	—	0.8
Bulgaria	2.8[2]	0.1	1.1	0.8	1.1	1.5	1.4	0.7
China (Shanghai)	—	—	0.6	1.2	0.3	1.8	1.4	0.5
Colombia	—	0.4	—	2.7	1.3	2.6	0.7	0.7
Denmark (Copenhagen)	2.5	3.7	1.4	3.9	2.2	1.3	1.0	1.8
Estonia (Tallinn)	—	—	2.7	0.7	2.7	0.2		0.6
United States (New York City)	—[6]	0.8[7]	—[8]	5.1	0.3	1.9	3.5	6.3
Finland	1.1[2]	0.5	1.0	—	1.6	1.1	1.6	2.4
Hungary	1.2[2]	0.8	1.4	2.7	2.3[10]	1.2		—
India (Ahmedabad)	—	0.8	—	3.3	—[8]	4.0	0.4	0.4
Japan	—	—	—[11]	2.2	2.5	3.3	3.7	5.0
Latvia	4.8[2]	—	—[11]	4.4	4.7	3.8	—	1.6
Norway	1.7	3.4	1.3	2.1	1.7	0.3	1.1	1.5
New Zealand	6.2[12]	—	1.1	3.5	1.6[13]	—	2.4	2.2
Netherlands	5.8[2]	2.3	1.5	1.7	2.0	0.7	3.1	2.6
Poland	4.0[2]	0.2	—	1.1	1.6	1.6	0.3	1.1
Sweden	2.3	2.3	—	3.1	1.8	1.0	2.1	2.1
Switzerland (Zurich)	4.5	0.9	1.4	2.1	2.4	1.2	2.2	3.7
Czecho-Slovakia	4.9[2]	0.8	—	1.0	1.2	0.9	0.8	1.9
Union of South Africa	1.2	0.2	2.7	3.8	2.4	1.0	3.7	2.6
	Non-manual workers (S.E. = salaried employees, C.S. = civil servants)							
Germany S.E.	6.5	1.4	—	1.7	3.2	1.1	1.1	4.1
C.S.	2.0	1.0	—	1.2	4.1	0.9	2.0	4.2
Belgium S.E.	—	—	—	—	4.9	2.7		8.4
Bulgaria C.S.	6.0[2]	0.2	1.1	1.5	1.6	1.3	1.5	1.4
Denmark (Copenhagen) C.S.	2.0	2.0	0.9	4.7	2.0	1.5	1.6	1.8
Finland S.E.	2.0[2]	0.3	—	—	2.7	1.0	1.8	3.1
C.S.	2.8[2]	0.5	—	—	3.2	0.8	2.2	3.5
Japan S.E.	—	—	—[11]	3.6	2.4	2.9	3.8	6.0
Norway C.S.	1.4	1.8	1.4	2.9	1.2	0.2	2.0	1.9
Netherlands : Non-manual	8.6[2]	0.5	1.7	3.3	5.2	1.0	3.3	4.8
Sweden : Lower officials	4.0	1.0	—	3.8	2.4	1.1	2.4	2.2
Middle class	4.2	0.7	—	4.8	3.1	1.3	2.3	3.1
Switzerland (Zurich) S.E. and C.S.	2.3	0.7	2.0	2.6	3.0	1.6	3.4	5.7
Czecho-Slovakia S.E.	6.3[2]	0.5	—	1.5	2.3	1.0	2.1	3.8
Lower officials	5.2[2]	0.4	—	1.0	1.9	0.8	1.1	2.5

[1] Includes contributions to co-operative societies.
[2] Includes life insurance premiums.
[3] Includes other personal expenditure.
[4] Included with "education".
[5] Includes drink.
[6] Expenditure for insurance is returned under the appropriate heading according to kind of insurance.
[7] Relates to vocational expenditure.

(Notes continued on the next page.)

TABLE XIII. ANALYSIS OF EXPENDITURE ON MISCELLANEOUS ITEMS IN PERCENTAGES OF TOTAL EXPENDITURE OF MANUAL AND NON-MANUAL WORKERS' FAMILIES IN 24 COUNTRIES *(cont.)*

Country	Tobacco	Gifts and assistance	Stationery, stamps, and telephone	Domestic service	Other	Total miscellaneous expenditure	Total consumption expenditure
	Wage earners						
Germany	1.6	1.6	0.1	0.0	1.3	21.4	100.0
Argentina	2.1	—	—	—	1.8	12.0	100.0
Austria	2.0	2.3	—	—	2.2	23.9	100.0
Belgium	—	—	—	—	—	10.3	100.0
Brazil	1.8[3]	—	—	—	10.5	16.2	100.0
Bulgaria	2.4	0.7	—[4]	0.1	1.6	14.1	100.0
China (Shanghai)	2.5	6.3	—	0.1	5.8	20.4	100.0
Colombia	1.9	—	—	0.3	0.1	10.6	100.0
Denmark (Copenhagen)	2.2	2.7	0.6	0.6	2.2	26.1	100.0
Estonia (Tallinn)	2.2[5]	—	—	—	1.3	10.5	100.0
United States (New York City)	—[9]	1.6	—[8]	—[8]	4.0	23.6	100.0
Finland	2.3	1.7	0.3	0.8	1.3	15.6	100.0
Hungary	1.6	0.5	—	0.3	7.0	18.9	100.0
India (Ahmedabad)	3.5	3.7	0.3	—[11]	7.2	23.6	100.0
Japan	1.4	7.9	0.1	—	2.7	28.9	100.0
Latvia	2.3	1.3	—	0.2	1.0	24.2	100.0
Norway	1.6	1.0	0.3	0.1	2.3	18.4	100.0
New Zealand	1.3	—	—	—	10.0	28.3	100.0
Netherlands	1.9	1.6	0.1	0.4	2.1	25.7	100.0
Poland	2.2	0.5	—	0.3	0.4	13.0	100.0
Sweden	1.4	2.4	0.7	0.3	1.7	21.0	100.0
Switzerland (Zurich)	1.1	2.0	0.6	0.1	0.6	22.9	100.0
Czecho-Slovakia	2.0	1.1	0.3	0.1	0.9	15.7	100.0
Union of South Africa	1.7	0.7	1.2	3.5	1.3	26.1	100.0
	Non-manual workers (S.E. = salaried employees, C.S. = civil servants)						
Germany S.E.	1.4	2.8	0.4	1.1	1.7	26.5	100.0
C.S.	1.2	3.9	0.4	2.2	1.7	24.8	100.0
Belgium S.E.	—	—	—	—	—	11.1	100.0
Bulgaria C.S.	1.0	0.9	—[4]	1.0	3.1	20.7	100.0
Denmark (Copenhagen) C.S.	2.2	2.6	1.1	1.8	3.1	27.3	100.0
Finland S.E.	1.7	3.3	0.5	2.0	1.6	20.0	100.0
C.S.	1.0	3.7	0.7	10.3	1.8	30.6	100.0
Japan S.E.	1.4	8.5	0.2	—	3.0	31.7	100.0
Norway C.S.	1.1	1.2	0.4	0.3	3.0	18.9	100.0
Netherlands Non-manual	1.2	6.0	0.6	5.5	2.7	44.3	100.0
Sweden Lower officials	1.2	2.4	0.9	0.5	1.6	23.4	100.0
Middle class	1.3	3.3	1.6	2.9	2.3	31.0	100.0
Switzerland (Zurich) S.E. and C.S.	0.8	3.1	1.0	0.5	0.7	27.3	100.0
Czecho-Slovakia S.E.	1.2	1.9	0.5	1.3	1.3	23.5	100.0
Lower officials	1.3	1.4	0.3	0.1	1.2	17.1	100.0

[4] Included with "other miscellaneous expenditure".
[8] Included with "recreation".
[10] Includes recreational expenditure.
[11] Included with "hygiene and personal care".
[13] Includes superannuation.
[15] Relates to papers, books, and postage.

include the Netherlands (2.0), Germany (2.1), Denmark (2.2), Hungary (2.3), the Union of South Africa and Switzerland (2.4), Japan (2.5), Estonia (2.7), Belgium (4.0), and Latvia (4.4). The significance of these items depends in part, of course, on the scope of Government provision for education.

The percentage of expenditures on *hygiene and personal care* (19 countries) ranged from 0.2 in Argentina to 3.3 in Japan and 4.0 in India (Ahmedabad). Seven countries had proportions of less than 1.0 per cent.

Percentages expended for *medical care* varied from less than 0.2 per cent. in Estonia and 0.3 per cent. in Poland to 3.7 per cent. in Japan. Countries with 2 per cent. or over included Argentina, Sweden, Switzerland, New Zealand, Austria, the Netherlands, the United States, the Union of South Africa, and Japan. These percentages, of course, have to be interpreted in the light of social insurance provisions and Government provision for hospitals, etc., as well as the general health conditions in the country.

The proportions spent for *recreation and amusements* range from 0.1 per cent. in Argentina to 6.3 per cent. in the United States. Seven countries showed percentages over 2.5, including Austria, the Netherlands, the Union of South Africa, Switzerland, Japan, Belgium, and the United States. For Japan, the figure is 5.1 per cent. Countries with very low proportions, less than one per cent., included Argentina, India (Ahmedabad), China, Estonia, Bulgaria, and Brazil.

The range of percentages spent on *tobacco* was from 1.1 per cent. in Switzerland to 3.5 per cent. in India. (In the latter country opium is included with tobacco.)

The percentage expenditure for *gifts and assistance* (18 countries) ranged from 0.5 per cent. in Hungary and Poland to 7.9 per cent. in Japan. Other countries of the Far East also showed very high proportions (6.3 per cent. in China and 3.7 per cent. in India). Apart from these countries, the highest percentage spent for gifts and assistance was 2.7 in Denmark.

Expenditure on *stationery, stamps,* and *telephone,* (11 countries) ranged only from 0.1 per cent. to 1.2 per cent.

Figures for *domestic service* (15 countries) showed percentage variations from 0.0 in Germany to 3.5 in South Africa.

No special comment is possible for the group " other ", since the definition obviously varies from country to country.

In summary of the findings by social classes and by income classes these 13 groups of items may be divided into three sets : those where the percentage expended was lower for civil servants and salaried employees than for wage earners or the trend decreased as income increased ; those where the trend was neutral or very slightly upward ; and those where the trend was sharply upward as income increased.

In the first set, only one item is found—namely, tobacco. In the case of tobacco, the proportion expended shows a decrease as income increased, and in general the salaried employees and civil servants spent a smaller proportion than wage earners. In this respect, tobacco expenditure shows a behaviour somewhat like that of items in the

food group. This is of special interest since tobacco is often included in the food group in many family budget studies ; though its inclusion with food could scarcely be justified on the basis of any nutritive value.

In the group of items of neutral character—that is, where the amounts expended increase *pari passu* with increase in income, so that the percentage expenditure remains approximately constant—are included contributions, cleaning and washing, insurance, and perhaps medical care and hygiene and personal care.

In the case of insurance, about half the countries showed slight decreases and half the countries slight increases as income increased. In the case of medical care and hygiene and personal care, the general tendency was perhaps towards a slight increase, but the evidence is conflicting.

In the third group fall most of the items and groups of items classified under miscellaneous ; these show sharp increases in percentage expenditures as income increased. In this category fall transport, education, and newspapers, etc., recreation and amusements, gifts and assistance, stationery, stamps, and telephone, domestic service, and " other ". The degree to which these different items show increases varies. Stationery, stamps, and telephone, for example, are a somewhat irregular item, and in one or two countries the tendency of expenditures on these items is neutral rather than upward. On the other hand, transport, and recreation and amusements, for example, show sharp and rapid increases in percentages as income increases. [1]

[1] Throughout this discussion, it should be noted, the expression " as income increases " has been used to cover both the expressions " as income increases " and " as expenditures increase ". The correct expression depends of course upon the method followed in the individual studies ; in general, the classifications in most studies are based upon " income " rather than upon " expenditure ", while the percentages of expenditure are in general based on the total of " consumption expenditure ".

An International Survey of Recent Family Living Studies: II

Food Expenditure and Consumption Habits

The first part of the present study appeared in the previous number of this Review [1] *and dealt with family incomes and expenditure; in that article the results of recent family living enquiries in a large number of countries were analysed and discussed. The article which follows, based on the material, is limited to the group "food" of these enquiries.*

The question of consumption habits, especially in relation to food, has attracted much attention in recent years, and various studies and reports have been issued recently by the International Labour Office and the League of Nations in connection with their enquiries into nutrition and standards of living.

Expenditures on food are first analysed to show the proportions spent on different foods; the actual quantities purchased or consumed are then analysed according to the income of the family and where possible according to calorie value and nutritive content in vitamins and minerals. A distinction is also made between families of wage earners, or manual workers, and those of non-manual workers, in view of the different consumption habits shown by these two classes of families.

Unfortunately, information is not available for certain countries, and even for those countries where family living studies have recently been made the data differ in their degree of representativeness, the period to which they relate, and the methods of classification and analysis adopted. Only very general conclusions, therefore, can be drawn from the data here assembled.

In order to show the importance of food expenditure in the total budget, table I gives the percentages of expenditure devoted to food in the countries covered.

The percentages vary from 23 per cent. to 67 per cent. of the total budget, being in general higher among wage earners than among non-manual workers and largest in the low-income and smallest in the high-income groups. Differences between countries may thus be due to differences in general income level; but other influences, such as climate, national habits and customs, etc., play an important part in influencing not only proportionate expenditures but, as will be seen later, the specific direction of these expenditures and the quantities of the different foodstuffs consumed [2].

[1] See *International Labour Review*, Vol. XXXIX, No. 5, May 1939, pp. 662-705.

[2] In Japan and other countries of the Far East, for example, different standards of food expenditure in relation to other needs are found from those prevailing in the countries of European culture.

TABLE I. FOOD EXPENDITURE AS A PERCENTAGE OF TOTAL CONSUMPTION EXPENDITURES IN 25 COUNTRIES

Country	Date	Percentage o total expenditure spent on food	
		Wage earners' families	Non-manual workers' families [1]
Germany	1927–28	46.6	36.7 S.E. 35.5 C.S.
Argentina	1935	54.9	—
Austria	1934	50.3	—
Belgium	1928–29	59.6	51.0 S.E.
Brazil	1934	48.3	—
Bulgaria	1927–28	50.2	39.6 C.S.
China (Shanghai)	1929–30	55.8	—
Colombia	1936	63.9	—
Denmark (Copenhagen)	1931	37.5	34.9 C.S.
Estonia (Tallinn)	1925	59.0	—
United States (New York City)	1934–36	36.7	—
Finland	1928	50.5	41.1 S.E. 29.3 C.S.
Hungary	1929	52.9	—
India (Ahmedabad)	1933–35	49.3	—
Japan	1935–36	38.2	33.6 S.E.
Latvia (Riga)	1936–37	40.0	—
Mexico (Mexico City)	1934	56.4	—
Norway	1927–28	47.1	43.2 C.S.
New Zealand	1930	29.5	—
Netherlands	1935–36	40.1	22.8
Poland	1929	57.2	—
Sweden	1933	40.2	35.4 S.E. 26.5 C.S.
Switzerland (Zurich)	1936–37	35.2	29.1
Czecho-Slovakia	1931–32	54.7	39.5 S.E. 47.9 C.S.
Union of South Africa	1936	32.8 [1]	—

[1] S.E. = salaried employees ; C.S. = civil servants.
[2] Includes all groups.

Analysis of Food Expenditure

The distribution of food expenditure in percentages among nine broad food groups is shown in table II for 23 countries. The classification of food into groups follows in general the scheme drawn up by the International Labour Office for international comparisons in connection with the report on " Workers' Nutrition and Social Policy"[1]. The groups of principal interest are five in number : cereals and bread ; meats and fish ; fats ; milk, milk products, and eggs ; and vegetables and fruits. Besides these there are miscellaneous foods, alcoholic beverages, unclassified items, and meals taken outside the home.

[1] International Labour Office : *Studies and Reports*, Series B, No. 23, pp. 195-6. Certain slight changes have been introduced. Tobacco has been excluded ; marmalade, jam, etc., have been transferred from vegetables and fruits to miscellaneous foods, and alcoholic beverages have been taken from miscellaneous and placed in a separate group. Also for the sake of completeness a group of unclassified foods is given and for expenditure classifications a group " expenditures on meals taken outside the home " is added.

TABLE II. ANALYSIS OF ANNUAL FOOD EXPENDITURE PER FAMILY (WAGE EARNERS AND NON-MANUAL WORKERS) IN 23 COUNTRIES

Country	Date	Percentage of the total yearly food expenditure devoted to									Number of consumption units per family
		Cereals and bread	Meat and fish	Fats	Milk, milk products, and eggs	Vegetables and fruit	Miscellaneous foods	Alcoholic beverages	Unspecified	Meals taken outside the home	
		Wage earners									
Germany	1927-28	18.7	25.2	6.5	21.3	12.7	7.9	5.8	0.2	1.7	4.2 [1]
Argentina	1935	14.2	20.9	6.4	11.5	17.2	13.5	7.1	—	9.2	3.21
Austria	1934	19.0	22.6	9.8 [2]	17.7 [2]	11.2	12.5	3.0	4.2		2.94
Belgium	1928-29	14.5	24.3	4.3	29.8	12.8	11.5	2.5	0.3	—	3.21 [3]
Brazil	1934	34.0	16.0 [4]	10.0	9.0 [4]	13.0	18.0		—	—	—
Bulgaria	1927-28	36.4	17.4	7.2	11.4	13.6	8.0	4.2	1.8	—	3.02
China (Shanghai)	1929-30	53.4	14.7	6.3	1.6	18.9	4.4	—	—	0.7	3.42
Colombia (Bogota)	1936	22.0	16.4	5.0	9.0	21.7	13.3	8.1	—	4.5	3.97
Denmark (Copenhagen)	1931	12.9	25.7	4.6	18.0	10.7	11.9	7.1	—	9.1	2.97
Estonia (Tallinn)	1924-25	30.3	25.9	3.5	18.2	12.9	9.2	—	—	—	2.86
United States (North Atlantic cities)	1934-36	17.1	27.7	3.4	25.8	19.2	6.8	—	—	—	4.30 [1]
Finland	1938	20.4	16.7	2.8	34.6	6.6	13.8	1.1	1.0	3.0	3.45
India (Ahmedabad)	1933-35	30.7	4.4	3.2	18.9	16.4	22.4	3.0	1.0	—	—
Japan	1935-36	40.8	10.8	—	2.3	17.7	15.7	5.2	—	7.5	3.15
Mexico (Mexico City)	1934	35.0	15.3	0.2	22.5	11.9	9.5	5.2	0.4	—	4.10
Norway	1927-28	16.8	25.5	8.4	22.8	10.0	11.8	3.4	0.2	1.1	3.63
New Zealand	1930	13.9	22.1	—	24.2	11.7	28.2	—	—	—	—
Netherlands [5]	1935-36	25.6	17.3	11.7	18.3	12.6	13.0	0.6	0.1	0.8	3.84
Poland	1929	27.0	24.7	8.4	15.9	10.3	10.6	2.8	—	0.3	3.87
Sweden	1933	14.4	21.3	3.9	27.5	9.9	12.7	6.8	0.4	3.1	3.28
Switzerland (Zurich)	1936-37	13.2	18.9	3.3	28.1	17.1	9.5	5.3	0.4	4.2	2.28
Czecho-Slovakia	1931-32	17.7	21.5	8.3	19.7	8.7	12.1	6.7	1.2	4.1	2.91
Union of South Africa [7]	1936	15.8	22.2	1.3	25.4	15.6	17.3	1.2	—	1.2	4.06
		Non-manual workers [8]									
Germany : S.E.	1927-28	16.0	24.5	4.3	24.1	13.2	8.5	5.4	0.3	3.7	3.6 [1]
C.S.	»	16.4	24.4	4.3	24.6	13.3	8.4	5.3	0.2	3.1	3.9 [1]
Belgium : S.E.	1928-29	11.7	26.4	3.4	30.1	13.1	12.1	3.2	0.3	—	2.81 [3]
Bulgaria : C.S.	1927-28	29.6	18.5	6.5	17.4	13.4	9.8	2.6	2.2	—	3.21
Denmark (Copenhagen) : C.S.	1931	12.8	22.7	4.1	20.3	13.2	13.6	5.9	—	7.3	2.91
Finland : S.E.	1928	19.7	17.5	3.7	33.4	7.2	13.7	0.8	1.3	[4] 2.7	3.26
C.S.	»	17.3	18.8	5.0	30.0	8.6	13.2	0.9	1.7	4.5	3.10
Japan : S.E.	1935-36	35.3	11.5	—	3.0	19.4	16.4	3.9	—	10.5	2.94
Norway : C.S.	1927-28	13.9	26.7	7.3	24.0	11.7	11.5	3.1	0.3	1.4	4.10
Netherlands : Non-manual workers	1935-36	18.9	17.9	14.7	14.1	16.8	13.9	1.7	0.1	1.9	3.36
Sweden : Lower officials	1933	13.5	21.5	3.5	27.5	10.6	12.2	7.6	0.6	3.0	3.34
Middle class	»	11.7	19.7	2.5	25.5	13.1	10.7	9.2	0.8	6.8	3.32
Switzerland (Zurich) : S.E.	1936-37	12.1	18.5	2.6	27.4	20.0	9.3	4.6	0.4	5.1	2.28
Czecho-Slovakia : Lower officials	1931-32	14.4	24.8	6.4	21.3	9.7	11.5	5.5	1.7	4.8	2.75
S.E.	»	11.7	24.4	4.7	20.8	10.1	9.4	6.7	2.2	10.1	2.74

[1] Number of persons. [2] Butter included under fats. [3] Quets divided by 3.5 to convert to adult male units. [4] Eggs included with meat and fish.

The data are subject to reservations where the original report does not permit classification of expenditure on foodstuffs in the exact grouping adopted, and in some such cases the miscellaneous or the unclassified group may be unduly large. Furthermore, it must be borne in mind that in the analysis of the results when reference is made to the percentage expended in a particular country what is meant is always the percentage ascertained from a budget study in that country or in a particular city or group of cities in that country in a particular year, based on a sample of wage earners' families; the exact details of the selection of the families and of the scope of the study can be found in the original reports or in the summary published in the first part of this study which appeared in the last issue of the *Review*. In other words, too much weight should not be placed on any particular percentage as characteristic of a particular country or on the rank of a particular country as compared with others, in view of the limitations of the data on which the comments are based.

In half of the countries data are available not only for wage earners but also for non-manual workers, comprising salaried employees or civil servants, or both.

In the discussion the two groups of milk, milk products, and eggs, and vegetables and fruit will be taken first, since they are of special importance from the point of view of dietary analysis inasmuch as they contain the principal, though not the only, so-called protective foods. Following these, the other groups will be reviewed.

Milk, Milk Products, and Eggs

The proportion of the total food expenditure spent on this group of foodstuffs ranged, except for two countries, from 9 per cent. in Colombia and Brazil to 34.6 per cent. in Finland. In the two countries excepted, China and Japan, the proportions were abnormally low—1.6 per cent. in the former and 2.3 per cent. in the latter. Four countries fell in the range between 9 and 11½ per cent.: Argentina, Colombia, Brazil, and Bulgaria; 7 countries fell in the range between 15 and 20 per cent.: Austria, Denmark, Estonia, India, the Netherlands, Poland, and Czecho-Slovakia. In the group between 20 and 25 per cent. came Germany, Norway, New Zealand, and Mexico, while 5 countries have percentages above 25 per cent.: the Union of South Africa (25.4), Sweden (27.5), Switzerland (28.1), Belgium (29.8), and Finland (34.6).

While it is true, of course, that the proportionate expenditure on this group of foods is not a full test of the value of the diets, since data must also be available to show the actual quantities consumed in relation to the number of consumption units, it is generally found, as will appear later, that small proportions are spent for milk, milk products, and eggs, where incomes are low, while with increasing income the proportion expended on these items rises. Where large proportions are shown for this group of items it may be considered, roughly speaking, that the quality of the diets is also reasonably high.

If non-manual workers are compared with wage earners, the proportion spent on this group of products is higher for the non-manual workers in 7 of the 11 countries, and slightly lower in 4. Large

differences appear in only two cases—Bulgaria, where the proportions are 17.4 for civil servants and 11.4 for wage earners, and the Netherlands, where the proportion for non-manual workers is 14.1 and for manual workers 18.3.

Vegetables and Fruit

A second group of so-called protective foods is made up of vegetables and fruit. Here again, proportions varied considerably, though within a smaller range than in the case of the group of milk products and eggs, from 6.6 per cent. in Finland to 21.7 per cent. in Colombia. It is interesting to note that Finland, with the highest percentage expended on milk etc., has the lowest percentage in the vegetables and fruit group ; the latter may be more difficult to obtain than the former in that country. Colombia, on the other hand, with a low proportion spent on milk etc., has a high proportion here. Japan and China, both with extraordinarily low proportions spent for milk etc., have relatively high proportions for vegetables and fruit—17.7 and 18.9, both much above the average. Countries with high proportions in both groups include particularly Switzerland (28.1 and 17.1) and the Union of South Africa (25.4 and 15.6). Other countries with over 30 per cent. of the food budget expended on these two groups include Colombia (30.7), the Netherlands (30.9), Estonia (31.1), Norway (32.8), Germany (34.0), Mexico (34.4), India (35.3), New Zealand (35.9), Sweden (37.4), Finland (41.2), and Belgium (42.6).

Here again details of quantities consumed are necessary for adequate appraisal of dietaries.

Comparing non-manual workers with wage earners, all countries, with the exception of Bulgaria, showed larger proportions for the former than for the latter, and in Bulgaria the proportions were substantially equal.

Cereals and Bread

The proportion spent on cereals and bread ranged from 12.9 per cent. in Denmark to 53.4 per cent. in China. Countries with low proportions expended on this group include Sweden (14.4), Argentina (14.2), New Zealand (13.9), and Switzerland (13.2). Countries with high proportions include Estonia (30.3), India (30.7), Brazil (34.0), Mexico (35.0), and Bulgaria (36.4). High expenditures on bread and cereals indicate perhaps a limited amount available for food, since when more is available other foods are purchased for the sake of variety or for their greater value as furnishing minerals and vitamins.

Meat and Fish

The proportion expended on meat and fish ranges from 4.4 per cent. in India, where a vegetarian diet is commonly a matter of religious observance, to 25.9 per cent. in Estonia. Other countries with low figures include Japan (10.8), China (14.7), Mexico (15.3), Colombia (16.4), and Brazil (16.0). Countries with high proportions include besides Estonia : Denmark, Norway, Germany, Poland, Belgium, the

Union of South Africa, New Zealand, Austria, Czecho-Slovakia, Sweden, and Argentina ; all these had percentages higher than 20 per cent.

The percentages among non-manual workers varied only slightly from those among wage earners, being slightly higher in the former group in eight countries, and slightly lower in three.

Fats

The percentage expended for fats ranges from 0.2 in Mexico to 11.7 in the Netherlands. It should be noted, however, that this group does not include butter or cream, which are included with milk etc. on account of their vitamin content, or fat pork, bacon, etc., which are placed with meat and fish. This group is therefore one of the less significant groups for purposes of discussion.

Miscellaneous Foods

This group includes principally sugar and coffee, tea and chocolate, condiments, and the non-alcoholic beverages. The percentage expended varies from 4.4 per cent. in China (Shanghai) to 28.2 per cent. in New Zealand. Two-thirds of the countries included in the table had percentages between 9 and 14 ; Germany and Bulgaria, besides China, fell below 9, and the Union of South Africa (17.3), India (22.4), and New Zealand, had percentages above 14.

Other Groups

The remaining groups require little comment.

Alcoholic beverages constitute a relatively unsatisfactory classification, since the amounts spent on them are often incompletely returned. Part may be included in meals taken outside the home, and part may be omitted entirely. The informant who furnishes the data (who is usually the housewife) may in fact not know the total sums spent for alcoholic beverages. This group took a percentage expenditure in 19 countries ranging from 0.6 in the Netherlands to 8.1 in Colombia. Countries with percentages over 5 include Japan and Mexico (5.2 per cent.), Switzerland (5.3), Germany (5.8), Denmark and Argentina (7.1), and Colombia (8.1). Countries with low proportions, less than 2 per cent., include, besides the Netherlands (0.6), Finland (1.1) and the Union of South Africa (1.2). With the sole exception of Belgium, non-manual workers spent smaller proportions on alcoholic beverages than wage earners.

Unclassified amounts to 1 per cent. or less except for Bulgaria (1.8) and Czecho-Slovakia (1.2).

Meals taken outside the home have relatively small percentage expenditure in the 15 countries for which figures are given. Five countries, however, show between 3 and 4½ per cent. spent on such items and 3 countries—Japan (7.5 per cent.), Denmark (9.1 per cent.), and Argentina (9.2 per cent.)—have more than 5 per cent. expended in this way. With one exception (Denmark), the percentage amounts spent on meals outside the home were greater for non-manual workers than for wage earners, although in the case of salaried employees in

Finland and lower officials in Sweden the percentages were either slightly less than or the same as for wage earners.

Variations in Consumption

Of even greater interest than proportionate expenditures are data showing the actual quantities consumed. Such data are requisite for any adequate appraisal of dietaries ; indeed, for a dietary analysis usually much more refined techniques for obtaining data on quantities consumed, on household waste, etc., are required than can be furnished by means of family budget enquiries, such techniques including the weighing of actual amounts of foods eaten, conversion into calories according to standard tables, etc. The data of family living enquiries, however, though secured by means of less refined methods, are nevertheless of great value in a study of food consumption habits, of the directions of expenditure on foods, and of the differences between different countries, and even in a preliminary appraisal of dietary adequacy or inadequacy. [1]

Comparisons of the quantities of different foodstuffs consumed in different countries must be made in terms of some standard unit. The use of the family as a unit has the obvious disadvantage that the size and composition of families vary and the comparison of the quantities consumed per family does not show the true relative consumption. Only if the families in the budget enquiries were limited to a particular size and composition — for example, families of husband and wife and three children under 16 years of age—would it be possible to make useful comparisons of quantities consumed per family.[2] However, enquiries are in general not limited to a single family type, and few studies have a large enough volume of data relating to families of a particular size of composition to permit valuable comparisons of average family consumption. A second possible basis is per head. This avoids differences in the numbers of persons in the family but ignores differences in sex and age composition. An adult male in other words is counted as equal to the baby in arms in relation to food consumption. In these circumstances recourse is usually had to the device of the consumption unit, in which the consumption of an adult male is taken as unity and the consumption of other persons of different sex and age is expressed as a percentage of that of the adult male. Quantities consumed are then expressed in terms of the same basic unit of comparison.

Differences in Consumption Unit Scales

In making international comparisons, however, the problem is complicated by differences in consumption unit scales. In the 17 studies for which data per unit of consumption are available and which are reviewed here, 8 different consumption unit scales are utilised in the original reports. The differences between these scales

[1] See International Labour Office : *Studies and Reports, op. cit.*, pp. 37-38 and 197-233.

[2] In Sweden comparisons have been made in terms of a standard (the word "normal" is used in the source) family consisting of 3.3 consumption units. But this method is merely a variant of the method of consumption unit analysis.

are not great, but if the scales are applied to a single standard population they produce slightly different totals as the number of consumption units in the population.

In order to eliminate the effects of varying scales the consumption unit scales of the different enquiries must be reduced or converted to a uniform scale. Fortunately the populations considered in family budget enquiries are reasonably typical and it is possible to make approximate conversions to a standard scale by means of correction factors.

The question what consumption unit scale should be selected as standard must first be considered. For purposes of relative quantities consumed the choice of standard is not of primary importance since approximately the same relative results will be obtained by the use of any of the scales. But if the absolute quantities consumed per unit are to have meaning, then obviously the best and most significant scale should be used. From this point of view the scale based on calorie requirements developed under the auspices of the Health Organisation of the League of Nations seems worthy of consideration, and in table III the quantities consumed have been converted to a standard scale based upon the recommendations of experts called together by the Health Organisation. [1]

It should be noted that this scale is a calorie scale—that is, the unit is based on the calorie requirements of the adult male and the ratings are roughly requirements in calories of other persons in relation to this unit. The further point may be noted that, while the scale is approximate for purposes of testing relative calorie requirements, other scales are necessary for testing relative requirements of minerals, such as phosphorus, iron, or calcium, and of vitamins. [2]

Variations in Quantities Consumed per Consumption Unit

In table III the average consumption per standard consumption unit of each of a list of food items is shown for 17 countries for wage earners' and for non-manual workers' families.

In the discussion the group " milk, milk products, and eggs " will be treated first, then " vegetables and fruit ", " bread and cereals ", " sugar ", " meats and fish ", " fats and oils ", and other miscellaneous foodstuffs. The data of consumption among wage earners' families will be the first topic under each of these headings, followed by comments on the differences between consumption of non-manual workers' and wage earners' families and on the variations between income classes. It must be borne in mind, here, as suggested earlier in a similar connection, that differences in average consumption of wage earners in different countries may be due in part to differences in average income in these countries.

[1] The requirement (3,000 calories) of the adult male is taken as 1 and the calorie requirements in scale ratings for other persons are as follows : (*a*) both sexes : 0-1 year, 0.28 ; 2 years, 0.33 ; 3-4 years, 0.40 ; 5-6 years, 0.48 ; 7-8 years, 0.56 ; 9-10 years, 0.64 ; 11 years, 0.72 ; 12-13 years, 0.80 ; 60 years and over, 0.80 ; (*b*) males : 14-59 years, 1.00 ; (*c*) females : 14-59 years, 0.80.

[2] See below, p. 844.

TABLE III. AVERAGE FOOD CONSUMPTION IN KILOGRAMMES PER CONSUMPTION UNIT [18] IN WAGE EARNERS' AND IN NON-MANUAL WORKERS' FAMILIES IN 17 COUNTRIES

Wage earners

Item	Germany	Austria	Belgium	Bulgaria	Colombia	Denmark (Copenhagen)	Estonia (Tallinn)	United States (North Atlantic cities)
(1) Bread	112.3	99.7	196.7	211.7	25.4	93.6	204.4	46.9
(a) Wheat	21.4	18.6	195.4	—	—	16.7	28.3	25.8
(b) Rye	90.9	81.1	1.2	—	—	76.9	159.4	4.8
(c) Other	—	—	—	—	—	—	16.7	16.3
(2) Cakes, biscuits, pastry	6.6	3.7	3.4	— [7]	1.3	—	2.3	11.4
(3) Flour	15.6	27.4	7.2	50.5	8.9	13.2	10.3	10.4
(a) Wheat	—	—	—	—	—	13.2	8.5	9.5
(b) Other	—	—	—	—	—	—	1.9	0.9
(4) Cereals	7.5	10.7	4.4	19.4	49.5	5.5	16.0	10.2
(a) Rice	2.0	6.3	—	4.9	19.0	1.0	4.6	—
(b) Macaroni	2.4	1.5	—	1.3	—	1.3	0.9	4.3
(c) Other	3.1	2.9	—	13.2	—	29.2	11.1	5.9
I. Bread and cereals	141.9	141.4	211.6	281.5	85.0	112.4	232.9	78.9
(1) Beef, fresh	6.8	7.2	21.5	29.4	26.6	8.7	9.2	15.6
(2) Pork, fresh	8.3	22.4	8.0		1.3	20.8 [8]	6.3	4.4
(3) Mutton, fresh	0.6	0.1	0.0		1.3	—	7.7	4.1
(4) Veal, fresh	1.6	3.0	2.8		—	10.2	1.7	2.8
(5) Ham and bacon	3.9	—	8.9	—	—	— [9]	0.1	2.3
(6) Sausages, charcuterie	14.2	9.0	4.7	—	—	2.2	2.3	3.9
(7) Preserved meat	5.8	—	—	2.1	—	4.6	—	2.8
(8) Fish	7.0	1.6	8.9	3.9	0.1	8.7	37.7	7.6
(9) Poultry, *game, other meat*	7.8	9.4	4.0	2.1	15.2	5.1	12.7	7.1
II. Meat and fish	56.0	52.7	58.8	37.5	44.5	60.4	77.8	50.6
(1) Animal fat (total)	4.8	16.2	5.5	5.5	3.8	2.2	1.8	4.2
Lard	3.7	2.3	2.9	—	—	—	1.5	—
(2) Margarine	10.3	— [4]	4.8	—	—	17.9	2.9	—
(3) Vegetable fats	2.2 [5]	2.8	— [6]	0.0	2.5	0.4	—	2.8
(4) Vegetable oils (litres)	—	1.7 [5]	— [6]	4.4	—	—	—	—
III. Fats and oils [1]	17.3	20.7	10.4	9.5	6.3	20.5	4.6	7.0

(1) Milk (litres)	158.6	158.6	145.1	30.7	50.7	105.6	151.2	97.6
(*a*) Whole	156.8	149.7	—	25.9	50.7	94.4	142.5	92.3
(*b*) Other	1.8	8.9	—	5.0 [8]	—	11.2	8.7	5.4
(2) Cream (litres)	0.3	1.4	—	—	—	5.1	0.4	1.9
(3) Cheese	5.1	3.2	5.3	6.2	1.3	5.7	0.2	2.8
(4) Butter	6.2	3.9	17.5	0.5	1.3	9.6	5.2	7.6
(5) Eggs (number)	161	191	192	70	71	227	7	209
IV. Milk and milk products [3]	184.3	182.5	183.4	42.3	58.9	142.4	161.9	125.0
(1) Peas, beans	2.9	2.3	3.1	11.5	22.1	0.4	2.2	4.7
(2) Potatoes	162.7	56.2	220.2	19.1	125.6	92.6	205.4	57.0
(3) Fresh vegetables	32.6	49.1	41.9	37.2	24.1	6.5 [10]	55.0	43.8
(*a*) Leafy, green, yellow	16.6	—	10.7	—	—	—	22.3	28.7
(*b*) Other	16.0	—	31.2	—	—	—	32.8	15.1
(4) Fresh fruit	30.2	48.8	13.5	20.1	—	0.8	23.6	47.8
(*a*) Citrus fruit	—	—	1.9	— [7]	—	—	—	15.6
(*b*) Other	—	—	11.6	—	—	—	—	32.2
(5) Preserved vegetables and fruit	3.0	—	4.6	7.1	—	0.5	—	18.1
(6) Nuts	0.6	—	—	1.0	—	—	—	0.9
(7) Other	7.9	—	—	36.4	—	—	—	—
V. Vegetables and fruit	239.9	156.3	283.0	132.3	171.8	100.8	286.2	172.2
(1) Sugar etc.	20.0	25.7	24.2	11.5	29.2	35.0	29.0	23.1
(*a*) Sugar bought as such	17.6	24.0	14.7	9.3	29.2	35.0	28.6	20.3
(*b*) Other	2.4	1.7	9.5	2.2	—	—	0.4	2.8
(2) Condiments	7.3	3.2	9.4	5.3	12.7	—	—	—
(*a*) Salt	—	3.2	8.3	5.3	12.7	—	—	—
(*b*) Other	—	—	1.1	1.9 [9]	—	—	—	—
(3) Tea	0.1	0.1	0.0	0.1	—	—	0.3	0.7
(4) Coffee	4.8	6.1	12.3	0.9	1.3	6.8	2.7	3.7
(*a*) Beans	1.4	—	6.7	0.3	1.3	6.8	2.1	3.5
(*b*) Substitutes	3.4	—	5.6	0.6	—	—	0.6	0.2
(5) Cocoa and chocolate	0.5	0.3	3.4	—	11.4	—	0.2	0.4
(6) Other non-alcoholic beverages (litres)	2.1	—	5.7	4.1	—	7.7	—	—
(1) Wine (litres)	2.9	3.3	1.0	13.2	4.7	—	—	—
(2) Beer (litres)	35.7	10.4	73.2	0.8	—	68.3	0.7	—
(3) Other (litres)	0.6	0.9	—	1.6	—	—	—	—
VI. Alcoholic beverages (litres)	39.2	14.6	74.0	15.6	4.7	68.3	0.7	—
VII. Other and unclassifiable	0.3	—	5.5	—	—	—	—	2.6 [11]

TABLE III. AVERAGE FOOD CONSUMPTION IN KILOGRAMMES PER CONSUMPTION UNIT [18] IN WAGE EARNERS' AND IN NON-MANUAL WORKERS' FAMILIES IN 17 COUNTRIES *(continued)*

Wage earners

Item	Finland	Hungary (Budapest)	Norway	Netherlands [12]	Poland	Sweden	Switzerland (Zurich)	Czecho-Slovakia	Union of South Africa [12]
(1) Bread	39.9	108.0	121.4	145.1	178.6	37.5	89.9	84.8	58.6
(*a*) Wheat	—	—	20.5	—	19.3	3.3	—	—	—
(*b*) Rye	28.0	—	97.9	—	159.5	34.2	—	—	—
(*c*) Other	11.9	—	3.0	—	—	—	—	—	—
(2) Cakes, biscuits, pastry	—	1.3	6.3	16.1	0.4	7.7	—	13.2	—
(3) Flour	78.3	54.9	19.1	6.1	29.2	62.4	10.1	52.7	72.1
(*a*) Wheat	30.3	—	13.9	3.4	25.7	43.5	9.1	—	—
(*b*) Other	48.0	—	5.2	2.7	3.5	18.9	1.0	—	—
(4) Cereals	16.7	6.4	5.5	6.0	10.6	6.9	20.0	7.2	21.5
(*a*) Rice	6.2	4.2	0.6	3.6	4.6	1.5	3.8	3.8	13.5
(*b*) Macaroni	0.6	0.5	0.2	1.0	0.5	—	9.6	0.2	—
(*c*) Other	9.9	1.7	4.6	1.4	5.5	5.4	6.6	3.2	—
I. Bread and cereals	134.9	170.5	152.4	173.5	218.9	114.5	120.0	157.9	152.2
(1) Beef, fresh	11.0	5.3	9.7	13.9	16.9	6.9	6.8	10.5	
(2) Pork, fresh	9.2	9.8	3.9	7.1	8.0	11.6	8.1	9.7	55.5
(3) Mutton, fresh	—	0.5	3.3	0.3	0.4	0.5	0.1	0.6	
(4) Veal, fresh	1.5	1.6	1.4	1.4	0.6	5.3	2.2	1.9	
(5) Ham and bacon	—	1.6	4.3	2.5	10.6	3.7	—	—	2.7
(6) Sausages, charcuterie	6.4	3.7	16.4	6.0 [13]	7.9	7.2	14.3	7.2	—
(7) Preserved meat	1.7	—	2.3	— [13]	—	5.6	0.3	2.6	—
(8) Fish	16.0	0.3	49.3	6.1	4.6	18.1	—	—	6.2
(9) Poultry, game, other meat	5.0	5.6	1.8	1.4	2.4	8.7	3.7	7.7	—
II. Meat and fish	50.8	28.4	92.3	38.8	51.1	67.4	35.6	40.1	64.4
(1) Animal fat (total)	1.1	15.6	0.7	7.5	2.6	0.8	0.7	12.9	—
Lard	—	7.2	—	2.1	2.4	—	—	0.6	—
(2) Margarine	4.6	—	25.2	9.9	— [4]	12.1	—	3.1	—
(3) Vegetable fats	—	—	—	2.5 [3]	0.4	—	5.6	—	—
(4) Vegetable oils (litres)	—	—	—	—	0.3 [5]	—	4.1	—	—
III. Fats and oils [1]	5.7	15.6	26.0	19.8	3.3	13.1	10.0	16.0	—

(1) Milk (litres)	331.6	113.1	205.9	198.8 [14]	83.3	251.5	270.4	154.5	132.0
(a) Whole	309.8	113.1	161.0	173.2 [14]	77.5	243.5	270.4	154.5	128.5
(b) Other	21.7	—	44.9	25.6 [14]	5.8	8.0	—	—	3.5
(2) Cream (litres)	5.3	1.1	8.1	0.7 [14]	1.8	6.8	—	—	—
(3) Cheese	1.1	0.2	8.6	5.5	1.8	6.8	6.6	3.7	3.0
(4) Butter	14.7	0.8	2.7	4.9	2.4	11.9	8.5	3.8	12.9
(5) Eggs (number)	61	80	145	165 [14]	57	238	176	169	201
IV. Milk and milk products [2]	364.9	116.0	237.7	225.3	94.7	296.4	303.8	176.5	159.6
(1) Peas, beans	1.6	4.3	2.4	3.1	4.6	1.9	1.0	2.0	—
(2) Potatoes	114.7	72.1	93.5	169.9	202.1	114.9	65.6	100.5	61.7
(3) Fresh vegetables	—	47.8	13.2	60.9	53.1	12.7	59.4	35.8	—
(a) Leafy, green, yellow	—	28.3	8.1	16.1	23.3	2.1	—	—	—
(b) Other	—	19.5	5.1	44.8	29.8	10.6	—	—	—
(4) Fresh fruit	—	28.7	14.0	38.3	6.5	33.8	83.9	33.1	—
(a) Citrus fruit	—	—	5.6	7.4	0.2	6.5	—	—	—
(b) Other	—	—	8.4	30.9	6.2	27.2	—	—	—
(5) Preserved vegetables and fruit	—	—	3.2	8.7	—	4.5	3.7	—	—
(6) Nuts	—	0.5	—	2.0	—	—	2.6	—	—
(7) Other	—	7.4	—	—	—	—	—	—	—
V. Vegetables and fruit	116.3	160.7	126.3	282.9	266.3	167.8	216.1	171.4	61.7
(1) Sugar etc.	29.9	22.0	29.0	26.7	21.1	43.2	32.2	29.8	58.6
(a) Sugar bought as such	29.8	21.3	24.9	20.9	19.8	40.0	29.8	28.8	45.5
(b) Other	0.1	0.7	4.1	5.8	1.3	3.2	2.4	1.0 [17]	13.1
(2) Condiments	—	6.2	—	7.0	5.5	3.6	—	4.4	—
(a) Salt	—	4.8	—	5.0	5.5	3.6	—	4.4	—
(b) Other	—	1.4	0.0	2.0	—	—	—	—	—
(3) Tea	0.0	0.0	0.1	1.4	0.2	0.1	0.3	—	3.0
(4) Coffee	6.1	2.9	6.2	2.9	1.6	5.9	3.4	6.6	2.8
(a) Beans	6.1	0.8	—	2.8	0.3	5.9	—	0.8	2.8
(b) Substitutes	—	2.1	—	0.1	1.4	—	—	5.8	—
(5) Cocoa and chocolate	0.0	0.3	1.1	0.3	0.1	0.4	3.3	—	—
(6) Other non-alcoholic beverages (litres)	—	—	0.8	2.3	—	28.4 [15]	10.2	—	—
(1) Wine (litres)	—	3.4	0.1	0.5	—	0.1	7.2	0.4	—
(2) Beer (litres)	—	1.7	10.6	1.0	—	6.3	23.1	53.7	—
(3) Other (litres)	—	0.3	0.7	0.3	—	3.9	10.9 [16]	3.1	—
VI. Alcoholic beverages (litres)	—	5.4	11.4	1.9	—	10.3	41.1	57.2	—
VII. Other and unclassifiable	—	0.2	—	1.5	—	—	—	—	—

Non-manual workers
(S. E. = salaried employees; C. S. = civil servants)

Item	Germany		Belgium	Bulgaria	Finland		Sweden		Switzerland (Zurich)	Czecho-Slovakia	
	S. E.	C. S.	S. E.	C. S.	S. E.	C. S.	Lower officials	Middle class	S. E.	Lower officials	S. E.
(1) Bread	101.7	107.1	155.5	201.	42.5	41.0	38.1	37.3	71.6	67.7	61.8
(*a*) Wheat	25.9	25.0	154.0	—	—	—	3.5	5.5	—	—	—
(*b*) Rye	75.7	82.1	1.6	—	30.3	26.8	34.6	31.8	—	—	—
(*c*) Other	—	—	—	—	12.3	14.1	—	—	—	—	—
(2) Cakes, biscuits, pastry	10.1	9.1	5.8	— [7]	—	—	7.7	9.5	—	18.0	21.9
(3) Flour	13.1	16.0	7.8	36.1	68.0	54.5	54.3	44.5	0.1	46.6	39.0
(*a*) Wheat	—	—	—	—	35.5	33.7	39.8	35.1	9.1	—	—
(*b*) Other	—	—	—	—	32.5	20.8	14.5	9.4	1.0	—	—
(4) Cereals	7.1	7.7	6.4	8.3	18.1	16.8	7.0	8.2	17.7	6.2	6.1
(*a*) Rice	1.9	2.1	—	4.9	5.8	4.0	1.5	1.3	3.8	3.5	3.5
(*b*) Macaroni	1.9	2.2	—	1.7	0.8	0.8	—	—	7.9	0.1	0.2
(*c*) Other	3.3	3.4	—	1.6	1.4	12.1	5.5	6.9	6.0	2.6	2.3
I. Bread and cereals	132.0	139.9	175.7	246.1	12[illegible].6	112.3	107.1	99.5	99.5	138.4	128.8
(1) Beef, fresh	8.3	8.3	28.4	32.5	11.3	16.6	6.4	5.9	6.7	11.8	11.5
(2) Pork, fresh	8.4	8.6	8.2		7.2	7.2	12.2	10.3	7.6	11.8	11.2
(3) Mutton, fresh	1.0	1.0	0.0		—	—	0.7	1.4	0.2	0.8	1.0
(4) Veal, fresh	2.8	2.9	5.1		2.	4.2	5.7	6.5	3.0	3.5	5.1
(5) Ham and bacon	4.0	4.1	6.4	—	—	—	3.3	3.1	—	—	—
(6) Sausages, charcuterie	14.4	14.5	4.7	—	7.1	8.5	7.6	6.3	12.9	7.5	9.2
(7) Preserved meat	3.8	3.6	—	2.7	1.5	1.1	5.4	6.8	0.4	3.4	4.1
(8) Fish	8.2	7.8	13.6	4.3	19.4	21.4	18.9	19.2	—	—	—
(9) Poultry, game, other meat	8.6	8.5	4.5	2.1	6.6	7.7	9.3	10.8	4.0	11.9	14.0
II. Meat and fish	59.3	59.2	70.8	41.6	57.3	66.8	69.6	70.3	34.7	50.8	56.1
(1) Animal fat (total)	3.7	3.7	5.3	5.2	1.0	1.0	0.8	0.8	0.6	11.8	9.8
Lard	2.8	2.9	1.8	—	—	—	—	—	—	0.7	0.7
(2) Margarine	7.3	7.1	3.4	—	7.3	11.4	11.3	9.5	—	2.2	2.3
(3) Vegetable fats	2.0 [3]	2.3 [3]	— [6]	0.1	—	—	—	—	4.1	—	—
(4) Vegetable oils (litres)	—	—	— [6]	4.5	—	—	—	—	4.7	—	—
III. Fats and oils [1]	13.0	13.1	8.7	9.3	8.3	12.4	12.1	10.3	8.9	14.1	12.1
(1) Milk (litres)	163.0	171.8	185.4	56.9	319.5	309.1	264.3	237.2	246.1	166.2	180.2
(*a*) Whole	160.9	169.2	—	49.4	304.4	294.6	238.1	233.3	246.1	166.2	180.2
(*b*) Other	2.1	2.5	—	7.7 [5]	15.1	14.5	8.1	3.9	—	—	—
(2) Cream (litres)	1.1	1.1	—	—	8.4	10.0	7.8	8.0	—	—	—
(3) Cheese	5.7	5.7	5.5	8.9	1.9	2.5	6.4	7.2	6.2	4.7	4.7
(4) Butter	12.3	12.4	18.8	1.6	13.6	12.0	12.4	15.9	11.3	6.2	8.3
(5) Eggs (number)	190	187	218	109	82	113	256	304	194	218	258
IV. Milk and milk products [2]	197.5	206.7	227.9	75.3	355.6	346.7	292.7	290.8	283.7	190.1	213.5

(1) Peas, beans	2.2	2.2	3.2	9.7	1.6	1.5	1.8	1.9	0.9	2.1	2.2
(2) Potatoes	151.4	163.0	201.6	17.1	111.4	113.6	108.0	93.9	62.8	81.2	73.2
(3) Fresh vegetables	29.9	28.3	48.9	36.8	—	—	15.8	22.6	68.3	40.6	45.0
(*a*) Leafy, green, yellow	16.6	16.2	11.3	—	—	—	2.5	3.5	—	—	—
(*b*) Other	13.2	12.1	37.6	—	—	—	13.3	19.1	—	—	—
(4) Fresh fruit	42.3	46.3	19.5	31.6	—	—	35.7	52.0	105.1	42.6	50.3
(*a*) Citrus fruit	—	—	2.7	—[7]	—	—	7.2	11.4	—	—	—
(*b*) Other	—	—	16.7	—	—	—	28.5	40.6	—	—	—
(5) Preserved vegetables and fruit	3.7	3.5	6.5	4.0	—	—	5.2	8.0	4.8	—	—
(6) Nuts	1.0	1.1	—	1.7	—	—	—	—	3.4	—	—
(7) Other	9.4	8.9	—	33.8	—	—	—	—	—	—	—
V. Vegetables and fruit	239.9	253.2	279.8	134.7	112.9	115.1	166.5	178.4	245.4	166.6	170.7
(1) Sugar etc.	21.6	23.5	31.1	17.7	34.0	36.5	42.6	44.5	30.2	30.6	27.9
(*a*) Sugar bought as such	17.9	19.5	17.9	14.1	33.8	36.2	39.4	39.8	28.0	29.5	26.6
(*b*) Other	3.7	4.0	13.2	3.6	0.2	0.3	3.2	4.6	2.2	1.1[17]	1.3[17]
(2) Condiments	6.8	7.1	10.8	4.5	—	—	3.4	3.3	—	4.1	3.7
(*a*) Salt	—	—	9.4	4.5	—	—	3.4	3.3	—	4.1	3.7
(*b*) Other	—	—	1.3	2.1[8]	—	—	—	—	—	—	—
(3) Tea	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.3	—	—
(4) Coffee	4.4	4.7	12.2	1.2	5.7	4.9	5.6	4.9	3.1	6.5	5.1
(*a*) Beans	2.0	1.9	6.9	0.5	5.7	4.9	—	—	—	1.2	1.2
(*b*) Substitutes	2.4	2.8	5.3	0.7	—	—	—	—	—	5.3	3.9
(5) Cocoa and chocolate	0.5	0.5	3.4	—	0.0	0.1	0.5	0.6	4.1	—	—
(6) Other non-alcoholic beverages (litres)	2.9	2.3	10.2	5.8	—	—	23.5[16]	27.0[15]	8.5	—	—
(1) Wine (litres)	3.8	4.4	2.7	8.9	—	—	0.2	0.7	8.5	0.8	2.2
(2) Beer (litres)	30.0	28.4	87.1	1.2	—	—	6.0	9.6	16.7	42.0	57.2
(3) Other (litres)	1.0	0.8	—	1.1	—	—	4.6	5.4	3.4[16]	5.6	7.4
VI. Alcoholic beverages (litres)	34.7	33.7	89.8	11.0	—	—	10.8	15.7	28.5	48.4	66.8
VII. Other and unclassifiable	0.4	0.3	6.4	—	—	—	—	—	—	—	—

[1] Including vegetable oils in kg.
[2] Including milk and eggs in kg.
[3] Includes vegetable oils.
[4] Included with vegetable fats.
[5] Kg.
[6] Included with unspecified.
[7] Figures not reducible to kg.
[8] Vinegar (litres).
[9] Bacon included with pork.
[10] Carrots only.
[11] Soups.
[12] Manual and non-manual workers' families.
[13] Preserved meats included with sausages, etc.
[14] Figures calculated in litres (and numbers) by the International Labour Office.
[15] Non-alcoholic beer.
[16] Cider.
[17] "Powidel".
[18] The figures per consumption unit as given in the different sources have been converted by means of correction factors into averages for a standard consumption unit, as follows: (*a*) both sexes: 0-1 year, 0.28; 2 years, 0.33; 3-4 years, 0.40; 5-6 years, 0.48; 7-8 years, 0.56; 9-10 years, 0.64; 11 years, 0.72; 12-13 years, 0.80; 60 years and over, 0.80; (*b*) males: 14-59 years, 1.00; (*c*) females: 14-59 years, 0.80.

Milk, Milk Products, and Eggs.

The consumption of these so-called protective foods expressed in kilogrammes per year per unit (litres of milk and numbers of eggs have been converted into the equivalent kilogrammes) varies from 42.3 in Bulgaria to 364.9 in Finland for wage earners' families. Other countries with low figures include Colombia (58.9) and Poland (94.7). In the cases of China and Japan, which are not shown in the table, the average quantities consumed must be very low, judging from the data already given for percentage expenditures. At the upper end of the scale, Switzerland, Sweden, Norway, and the Netherlands, are associated with Finland in showing an exceptionally high per-unit consumption of these products.

As regards the individual items included in the group, much the same differences appear between countries. Finland has the largest consumption of milk, followed by Switzerland, Sweden, Norway, and the Netherlands. Bulgaria and Colombia have the lowest consumption. Milk therefore seems to be in a sense the determining element in this group, so far as kilogrammes are concerned; with regard to expenditure, eggs and butter are relatively much more important than is indicated by their weight. Norway had the largest consumption of cream, followed by Sweden, Finland, and Denmark. [1] Norway, again, had the largest consumption of cheese, followed by Sweden, Switzerland, Denmark, and Belgium. Of butter, Belgium had the largest consumption per unit, followed by Finland, South Africa, Sweden, Denmark, and Switzerland. As to eggs, the countries rank as follows: Norway, Sweden, Denmark, United States (North Atlantic Region), South Africa, Belgium, and Austria. Estonia had a very low per-unit consumption of cheese and eggs.

Comparing non-manual workers' with wage earners' families in four countries, the quantities consumed by non-manual workers' families were somewhat higher than those consumed by wage earners' families. In Bulgaria, where the per-unit consumption of wage earners was lowest, salaried employees' families consumed nearly twice as much per unit. However, in the three countries Finland, Switzerland, and Sweden, where the quantities per unit consumed by wage earners were very high, the quantities of most of these food items consumed by non-manual workers were slightly less than the consumption of wage earners' families. For example, salaried employees consumed slightly less milk, cheese, butter, etc., than wage earners, but more eggs.

Vegetables and Fruit.

The second main group of protective foods is comprised within the group of vegetables and fruit. Unfortunately, as to these, the data of the detailed studies are much less complete than in the case of milk products and eggs, and in some countries the amounts recorded apparently do not cover all products in the group.

[1] No data for Switzerland.

The group of vegetables and fruit may be divided into potatoes on the one hand and all other vegetables and fruits on the other.

Potatoes. Potatoes, which like bread and cereals are a rich source of carbohydrates, also yield substantial amounts of certain necessary minerals and vitamins. The consumption of potatoes varies from 19.1 kg. in Bulgaria per consumption unit per year to 220.2 kg. in Belgium. Other countries with high consumption include Estonia (205.4), Poland (202.1), the Netherlands (169.9), and Germany (162.7). Countries with less than 100 kg. per unit include (besides Bulgaria) Austria (56.2), United States (North Atlantic Region) (57.0), South Africa (61.7), Switzerland (65.6), Hungary (72.1), and Denmark (Copenhagen) (92.6).

Comparing wage earners' and non-manual workers' families, in most countries the consumption of potatoes by non-manual workers' families was slightly less than among wage earners' families.

Other vegetables and fruits. Leaving out of account Finland, Denmark, and South Africa, where the data on quantities do not cover all other vegetables and fruits, the quantities consumed of other vegetables and fruits varied from 32.8 kg. per consumption unit per year in Norway to 150.5 kg. in Switzerland.

In some cases the countries which were found to have a low consumption of milk products and eggs (for example, Bulgaria) have a high consumption of vegetables and fruits other than potatoes. On the other hand, Switzerland has a large consumption per unit of both groups of products.

Comparing wage earners' and non-manual workers' families, in every case the latter consumed the larger quantities of vegetables and fruits other than potatoes.

Bread and Cereals.

The average consumption of bread and cereals varied from 78.9 kg. per consumption unit per year in the United States (North Atlantic region) to 281.5 kg. in Bulgaria. Other countries with very high consumption included Estonia with 231.9 kg., Poland with 218.9, and Belgium with 211.6. The Scandinavian countries show average consumption figures relatively close together, 112.4 for Denmark, 114.5 for Sweden, 134.9 for Finland, and 152.4 for Norway. As well as in the United States the average consumption in Colombia was very low (85.0).

Analysing the groups under bread to show relative consumption of wheaten and rye bread, great differences appear. Belgium, for example, consumes almost exclusively wheaten bread; Estonia, on the other hand, has a much higher consumption of rye than of wheaten bread. Rye-consuming countries include particularly Estonia and Poland, but in a number of others the consumption of rye bread exceeds that of wheaten, including for example Germany (91 : 21), Denmark (77 : 17), Austria (81 : 19), and Norway (98 : 20); (the first figure represents the consumption of rye bread and the second that of wheaten bread). However, these figures do not tell the whole story, since in some countries a considerable amount of wheaten flour is

purchased, which would supplement the amount of wheat consumed in the form of bread. For example, in Sweden 43.5 kg. per unit of wheaten flour are consumed as compared with only 19 kg. of other kinds of flour.

Comparing wage earners and salaried employees, the consumption of bread and cereals is not far different in the two groups, though somewhat less for salaried employees in all the countries for which the comparison can be made.

Sugar, etc.

In close connection with bread and cereals, the item sugar, including jams etc., may appropriately be discussed. So far as food value is concerned sugar is an energy-giving food and has neither minerals nor vitamins. It serves therefore as a cheap source of calories.

The amount of sugar, including jams etc., consumed per consumption unit varied from 11.5 kg. in Bulgaria to 58.6 kg. in the Union of South Africa. Other countries with low consumption include Germany with 20.0 and Poland with 21.1 kg., while countries with high consumption include Sweden with 43.2 kg. and Denmark with 35.0.

Comparing wage earners and non-manual workers, the latter in each of the seven countries concerned show a larger consumption of sugar, except that salaried employees in Switzerland, the group of lower officials in Sweden, and the group of salaried employees in Czecho-Slovakia, showed smaller consumption than wage earners in the same countries.

Meat and Fish.

The group of meat and fish is a very important one in the diets of most countries. The total consumption varied from 28.4 kg. per consumption unit in Hungary to 92.3 kg. per unit in Norway. Among the countries with relatively low per-unit consumption are Switzerland (35.6 kg.), Bulgaria (37.5 kg.), the Netherlands (38.8 kg.), and Czecho-Slovakia (40.1 kg.). At the other end of the scale, countries with high consumption per unit included the Union of South Africa (64.4 kg.), Sweden (67.4 kg.), and Estonia (77.8 kg.).

The group of meat and fish may conveniently be divided into fish on the one hand and meats, etc., on the other.

Fish. The consumption of fish varied from 0.1 kg. per consumption unit in Colombia and 0.3 kg. in Hungary to 49.3 kg. in Norway. The consumption of fish in Norway was very much higher than in any other country, the next highest being Estonia with 37.7 kg. After Estonia the next highest is Sweden, with only 18.1 kg.

Meat (Excluding Fish).

The consumption of meats (excluding fish) varied within a relatively narrow range from 28.1 kg. in Hungary to 58.2 kg. in the Union of South Africa. Countries with low consumption included the Netherlands (32.7), Bulgaria (33.6), Finland (34.8), and Switzerland (35.6).

Countries with high consumption included Austria (51.1), Denmark (51.7), Belgium (49.9), and Sweden (49.3).

Of the individual items in the group of meats, 8 groups can be analysed ; beef, pork, mutton, veal, ham and bacon, sausages, preserved meats, and other meats including poultry. Each of these will be discussed briefly.

The consumption of *beef* was highest in Colombia (26.6), followed by Belgium (21.5), Poland (16.9), the United States (15.6), and the Netherlands (13.9), and was lowest in Hungary (5.3), followed by Germany and Switzerland (6.8), Sweden (6.9), Austria (7.3), Denmark (8.7), Estonia (9.2), and Norway (9.7).

The consumption of *pork* appeared highest in Austria and Denmark, where the average consumption per consumption unit was 22.4 and 22.8 kg. per year; but in both these countries ham and bacon are included with pork. Apart from these countries the highest consumption was found in Sweden (11.6) and Czecho-Slovakia (9.7). The consumption of pork was lowest in Colombia (1.3), followed by Norway (3.9), the United States (4.4), and Estonia (6.3).

The consumption of *mutton* was highest in Estonia, where it averaged 7.7 kg. per consumption unit. In two other cases an appreciable amount of mutton was consumed—in the United States 4.1 kg. and in Norway 3.3 kg. In all the other countries shown the consumption was very small.

The consumption of *veal* was highest in Denmark (10.2), followed by Sweden with about half as much (5.3 kg.), Austria (3.0), the United States and Belgium (2.8), and Switzerland (2.2).

The highest consumption of *ham and bacon* was found in Poland (10.6), followed by Belgium (8.9) and Norway (4.3).

The highest consumption of *sausages* appeared in Norway, with an average per consumption unit of 16.4 kg. Switzerland, with 14.3, and Germany, with 14.2, also had very high consumption per unit. The lowest consumption of sausages was found in Denmark—only 2.2 kg.

The following statement shows the order of preference for different meat (and fish) groups in each country :

Germany : Sausages, pork, other, (fish), beef, preserved meats, ham and bacon, veal, mutton.

Austria : Pork, other, sausages, beef, veal, (fish), mutton.

Belgium : Beef, ham and bacon and (fish), pork, sausages, other, veal, mutton.

Colombia : Beef, other, pork and mutton, (fish).

Denmark : Pork, veal, beef and (fish), other, preserved meats, sausages.

Estonia : (Fish), other, beef, mutton, pork, sausages, veal, ham and bacon.

United States : Beef, (fish), other, pork and mutton, sausages, preserved meats and veal, ham and bacon.

Finland : (Fish), beef, pork, sausages, other, preserved meats, veal.

Hungary: Pork, other, beef, sausages, veal and ham and bacon, mutton, (fish).

Norway: (Fish), sausages, beef, ham and bacon, pork, mutton, preserved meats, other, veal.

Netherlands: Beef, pork, (fish), sausages, ham and bacon, other and veal, mutton.

Poland: Beef, ham and bacon, pork, (fish), other, veal, mutton.

Sweden: (Fish), pork, other, sausages, beef, preserved meats, veal, ham and bacon, mutton.

Switzerland: Sausages, pork, beef, other, veal, preserved meats, mutton.

Czecho-Slovakia: Beef, pork, other, sausages, preserved meats, veal, mutton.

Countries with sausages in the leading position are Norway, Switzerland and Germany. In the first named, however, fish precedes sausages. The countries with beef in the leading position include Colombia, Belgium, Poland, the United States, the Netherlands, Finland, and Czecho-Slovakia. In the case of Finland, fish precedes beef in average consumption per unit. The countries with pork in the leading position include Denmark, Austria, Sweden, and Hungary, but in the case of Sweden fish precedes pork in average consumption. The only country with another meat group in preferred consumption is Estonia, where the group " other meats " is first, though preceded by fish. The consumption of fish exceeds that of any of the individual groups of meats as listed above in Norway, Estonia, Sweden and Finland.

Comparing the consumption of meat and fish among non-manual workers' families with that of wage earners' families, comparatively unimportant differences are found. In general there is an increase in the consumption per unit of meat and fish, but in the neighbourhood of 5 to 10 per cent. only. In one or two cases—for example, Sweden and Czecho-Slovakia—the increase in consumption per unit is in the range of 30 to 40 per cent. In Finland for civil servants it was about 30 per cent. higher and in Belgium it was 20 per cent. higher. In the case of Switzerland there was a slightly lower consumption of meat and fish among non-manual workers than among wage earners.

In the different countries the order of the different meats among non-manual workers has in some cases shifted from that found among wage earners. Among non-manual workers in Germany, for example, fish, which came fourth in the list, was displaced by beef, which came fifth. Preserved meats, which came sixth, were displaced by ham and bacon, which came seventh. In the case of Belgium the consumption of pork is greater than that of ham and bacon and the consumption of veal moves from last place to fourth place. In Sweden among the lower officials veal takes precedence over preserved meats, moving from the sixth to the fifth place. Among the middle class other meats displace pork in first place, beef falls from fourth to sixth place, and preserved meats advance from fifth to third place, ahead of veal. In

Czecho-Slovakia " other " takes first place from third, ahead of beef and pork, and veal moves from sixth to fifth place, ahead of preserved meats.

Fats and Vegetable Oils.

The consumption of fats and oils varied from 3.3 kg. per consumption unit in Poland to 26.0 kg. per consumption unit in Norway. Other countries with relatively low consumption included Estonia (4.6), Finland (5.7), Colombia (6.3), and the United States (7.0). At the other end of the scale, Denmark showed a consumption of 20.5, Austria 20.7, and the Netherlands 19.8.

Of the individual items, margarine is by far the most important. The consumption of margarine in the eight countries for which definite figures are given varied from 3.1 kg. in Czecho-Slovakia to 25.2 kg. in Norway. The Scandinavian countries all had relatively high consumption of margarine (Denmark 17.9, and Sweden, 12.1), with the exception of Finland, where consumption was only 4.6.

The consumption of animal fats varied from 0.7 kg. per unit in Norway to 16.2 kg. per unit in Austria. The consumption of vegetable fats varied from 0.0 in Bulgaria to 5.6 in Switzerland. Data are also given for vegetable oils, but are partly in kilogrammes and partly in litres, and are for only four countries.

Other Miscellaneous Foodstuffs.

Of the remaining group, miscellaneous foodstuffs, only three will be discussed in detail. The consumption of tea appears almost negligible, the amounts varying from 0.0 kg. in Belgium, Finland, and Hungary, and 0.1 in Germany, Bulgaria, Austria, Norway, and Sweden, to 1.4 in the Netherlands and 3.0 in the Union of South Africa. For this item, however, the kilogrammes consumed are perhaps less significant than the expenditures.

The consumption of coffee and coffee substitutes varied from 0.9 kg. in Bulgaria to 12.3 kg. in Belgium. Other relatively high figures include 6.8 kg. in Denmark, 6.6 in Czecho-Slovakia, 6.2 in Norway, 6.1 in Austria and Finland, 5.9 in Sweden, and 4.8 in Germany.

In certain cases the consumption is largely of coffee substitutes; for example, in Germany three times as much of coffee substitutes was consumed as of coffee, and in Belgium the amounts of coffee and coffee substitutes were approximately equal. In Czecho-Slovakia the consumption was largely of substitutes. On the other hand, in the United States and Denmark consumption is given as of coffee.

The consumption of cocoa and chocolate varied from 0.0 in Finland to 11.4 in Colombia. Two countries with relatively high consumption were Belgium, with 3.4, and Switzerland, with 3.3 kg., per consumption unit.

Alcoholic Beverages.

This group of items is relatively unsatisfactory from the point of view of the accuracy of the information upon which it is based. The

data are shown in terms of litres per consumption unit; obviously the quantity consumed depends on the type of beverage, in particular on whether beer or wine is the principal item of the group. The amounts of beer vary from 0.7 in Estonia, 0.8 in Bulgaria, and 1.0 in the Netherlands, to 73.2 litres in Belgium. Countries with high consumption of beer include Denmark with 68.3, Czecho-Slovakia with 53.7, and Germany with 35.7 litres. On this item it should be noted that a number of countries do not report.

As to wine consumption, the amounts per unit vary from 0.1 litre in Norway and Sweden to 13.2 litres in Bulgaria. Switzerland, with 7.2 litres per consumption unit, showed relatively high consumption of wine.

As already indicated, too much weight should not be given to these reported figures of the consumption of alcoholic beverages.

Non-manual Workers in Comparison with Wage Earners

The food consumption of non-manual workers compared with that of wage earners is summarised in table IV, which shows data for selected food items and food groups.

Increased consumption appears most strongly marked in the two groups " meats and fish " and " milk, milk products, and eggs ", and somewhat more uniform in the former than in the latter. In the case of the latter group, consumption among the non-manual workers in the three countries with very high quantities consumed—namely, Finland, Sweden, and Switzerland—was slightly less than that of wage earners. Among the individual items of the meat and fish group, increased consumption appears in practically all cases, though with some irregularities. The most uniform and greatest increases are found in the consumption of veal, mutton, poultry, game, etc., and fish. In these cases there was no instance of a decrease in consumption in any of the 11 separate groups of non-manual workers considered. In the case of other meats one or more of the groups showed smaller consumption figures than wage earners. In the case of " sausages, charcuterie " two groups showed decreases (the middle class in Sweden and salaried employees in Switzerland); ham and bacon, three groups (only 5 shown); " beef, fresh ", three groups; " pork, fresh ", four groups; and " preserved meats ", five groups.

The consumption of sugar also showed considerable increase among non-manual workers as compared with wage earners, with the exception of two groups, the lower officials in Sweden and the salaried employees in Switzerland.

More or less equal quantities consumed among these three classes were found in the case of vegetables and fruit. However, this result is the effect of two opposite tendencies, a lower consumption of potatoes (except in the case of civil servants in Germany) and a larger consumption of fresh vegetables (especially of the leafy, green and yellow vegetables group), of fresh fruits, and of preserved vegetables and fruits and nuts.

TABLE IV. FOOD CONSUMPTION OF NON-MANUAL WORKERS AS A PERCENTAGE OF THAT OF WAGE EARNERS IN 7 COUNTRIES [1]

Item	Germany		Belgium	Bulgaria	Finland		Sweden		Switzerland (Zurich)	Czecho-Slovakia	
	S.E.	C.S.	S.E.	C.S.	S.E.	C.S.	Lower officials	Middle class	S.E.	Lower officials	S.E.
I. *Bread and cereals:*											
(1) Bread	90.6	95.4	79.1	95.3	106.8	103.0	101.6	99.5	79.6	79.8	72.9
(*a*) Wheat	121.0	116.8	78.8	—	—	—	106.1	166.7	—	—	—
(*b*) Rye	83.3	90.3	133.3	—	108.2	95.7	101.2	93.0	—	—	—
(2) Cakes, biscuits, pastry	153.0	137.9	170.6	—	—	—	100.0	123.4	—	136.4	165.9
(3) Flour	84.0	102.6	108.3	71.5	86.8	69.6	87.0	71.3	100.0	88.4	74.0
(4) Cereals	94.7	102.7	145.5	42.8	108.4	100.6	101.4	118.8	88.5	86.1	84.7
II. *Meat and fish*	105.9	105.7	120.4	110.9	112.8	131.5	103.3	104.3	97.5	126.7	139.9
(1) Beef, fresh	122.1	122.1	132.1	110.5	120.9	150.9	92.8	85.5	98.5	112.4	109.5
(2) Pork, fresh	101.2	103.6	102.5		78.3	78.3	105.2	88.8	93.8	121.6	115.5
(3) Mutton, fresh	166.7	166.7	—		—	—	140.0	280.0	(200.0)	133.3	166.7
(4) Veal, fresh	175.0	181.3	182.1		153.3	280.0	107.5	122.6	136.4	184.2	268.4
(5) Ham and bacon	102.6	105.1	71.9	—	—	—	89.2	83.8	—	—	—
(6) Sausages, charcuterie	101.4	102.1	100.0	—	110.9	132.8	105.6	87.5	90.2	104.2	127.8
(7) Preserved meats	65.5	62.1	—	128.6	88.2	64.7	96.4	121.4	133.3	130.8	157.7
(8) Fish	117.1	111.4	152.8	110.3	121.3	133.8	104.4	106.1	—	—	—
(9) Poultry, game, etc.	110.3	109.0	112.5	100.0	132.0	154.0	106.9	124.1	108.1	154.5	181.8
III. *Fats and vegetable oils*	75.1	75.7	83.7	97.9	145.6	217.5	93.1	79.2	89.0	88.1	75.6
(1) Margarine	70.9	68.9	70.8	—	158.7	247.8	93.4	78.5	—	71.0	74.2
IV. *Milk, milk products, and eggs*	107.2	112.2	124.3	178.0	97.5	95.0	98.8	98.1	93.4	107.7	121.0
(1) Milk	102.8	108.3	127.8	185.3	36.4	93.2	97.9	94.3	91.0	107.6	116.6
(2) Cream	366.7	366.7	—	—	158.5	188.7	114.7	117.6	—	—	—
(3) Cheese	111.8	111.8	103.8	143.5	172.7	227.3	94.1	105.9	93.9	127.0	127.0
(4) Butter	198.4	200.0	107.4	320.0	92.5	81.6	104.2	133.6	132.9	163.2	218.4
(5) Eggs	118.0	116.1	113.5	155.7	134.4	185.2	107.6	127.7	81.5	129.0	152.7
V. *Vegetables and fruit*	100.0	105.5	98.9	101.8	97.1	99.0	99.2	106.3	113.6	97.2	99.6
(1) Potatoes	93.1	100.2	91.6	89.5	97.1	99.0	93.9	81.7	95.7	80.8	72.8
(2) Fresh vegetables	91.7	86.8	116.7	98.9	—	—	124.4	178.0	115.0	113.4	125.7
(3) Fresh fruit	140.1	153.3	144.4	157.2	—	—	105.6	153.8	125.4	128.7	152.0
VI. *Sugar*	108.0	117.5	128.5	153.9	113.7	122.1	98.6	103.0	93.8	102.7	93.6
VII. *Alcoholic beverages*	88.5	86.0	121.4	70.5	—	—	105.8	152.4	69.3	84.6	116.8
(1) Wine	131.0	151.7	270.0	67.4	—	—	(200.0)	(700.0)	118.1	200.0	275.0
(2) Beer	84.0	79.6	119.0	150.0	—	—	95.2	152.4	72.3	78.2	106.5

[1] The average consumption per consumption unit for wage earners in each country is taken as 100.
S.E. = salaried employees; C.S. = civil servants.

Decreases in consumption are found in the case of bread and cereals, and of fats and vegetable oils. Among the individual items in the bread and cereals group, wheaten bread in Germany and Sweden showed an increase, while in Belgium a decrease appeared. Rye bread showed increases in Belgium and in one of the two groups in Finland and Sweden. The group " cakes, biscuits, pastry " shows an increased consumption in six of the seven groups covered, in one case the consumption being the same. In the group of fats and vegetable oils, margarine showed sharply reduced consumption except in Finland.

The consumption of wine was larger among non-manual workers in all groups except salaried employees in Belgium, while that of beer showed increases in four groups and decreases in five.

In interpreting these results it should be borne in mind that the same consumption unit scale is applied to both wage earners' and salaried employees' families. In other words, the composition of the family is the determining factor in the number of consumption units. From the point of view of calorie consumption, it should be noted that the needs of an average salaried employee in calories are less than those of a manual worker. The data available in these family living studies, however, are not adequate to take full account of differences in calorie requirements of adults with different degrees of physical activity.

Variations in Consumption with Changes in Income

One of the most valuable results of enquiries into food consumption of families is that the effect of differences in family income on the amount spent on food and on quantities of different foodstuffs consumed can be studied. Information of this kind is important in the formulation of policies for raising the standard of living of the population.

In the following tables an attempt has been made to show the relative change in the quantities of specified foods with changes in income. (Income per consumption unit has been used in order to allow for the varying size of the family.) Eleven important foodstuffs or groups of foodstuffs have been selected for these computations. In view of various differences in classification as regards measurement of incomes etc., the figures should be considered as approximate and indicating general tendencies only. [1]

An examination of the indices in table V gives an idea both of the relation between increasing income per consumption unit and increasing consumption and of the variations in this relation in different countries.

[1] The method adopted has been to calculate for proportionate changes in income the proportionate change in quantities consumed on the assumption that the changes can be represented by a straight line. The result is expressed as a percentage. Thus, an index of plus 50 in the table means that an increase of 100 per cent. in income is accompanied by a 50 per cent. increase in quantities consumed or an increase of 10 per cent. in income by a 5 per cent. (half of 10) increase in quantities consumed. If no change in consumption is found as incomes change, the index is obviously zero ; and it is positive or negative as consumption increases or decreases with increasing income.

TABLE V. INDICES OF RELATIVE CHANGE IN QUANTITIES OF SPECIFIED FOODS CONSUMED WITH CHANGES IN INCOME PER CONSUMPTION UNIT IN 8 COUNTRIES [1]

Wage earners

Item	Germany	Belgium	Colombia	Finland	Norway	Poland	Sweden [2]	Czecho-Slovakia
Bread	—16.6	—10.9	104.4	43.2	— 9.0	— 7.8	16.5	—15.4
Bread, cereals, etc.	— 7.3	—10.1	149.8	— 0.1	— 0.7	1.9	—11.6	— 6.0
Meat and fish	59.7	75.9	182.4	57.2	31.6	59.0	34.3	56.6
Fats	—28.4	—47.7	—	— 4.1	9.0	52.4	—17.7	— 9.6
Milk	39.7	29.7	227.4	41.0	39.3	77.2	15.2	30.3
Cheese	56.8	90.6	197.7	119.7	60.3	35.5	26.0	—
Butter	138.2	104.3	218.3	40.4	164.9	98.6	66.9	60.8
Eggs	96.4	106.8	410.1	114.6	119.1	169.3	44.6	58.7
Potatoes	— 5.2	— 3.6	121.8	20.3	18.7	7.8	4.0	—15.8
Vegetables and fruits	21.6	17.5	—	—	34.3	21.3	—	—
Sugar	17.6	45.8	122.1	42.0	30.7	48.3	15.8	— 2.3

[1] With 100 per cent. increase in income per consumption unit the index shows the percentage of change in quantities consumed.
[2] Wage earners and lower officials.

Non-manual workers

Item	Germany		Finland		Sweden	Czecho-Slovakia	
	S. E.	C. S.	S. E.	C. S.	Middle class	S. E.	C. S.
Bread	—13.1	—19.0	— 2.8	— 8.1	— 0.1	5.4	—11.5
Bread, cereals, etc.	— 2.6	—10.5	— 5.9	3.6	—15.7	11.0	— 3.5
Meat and fish	36.4	17.4	46.9	53.9	21.8	88.6	50.5
Fats	—35.6	—28.9	—41.3	25.5	— 9.6	—10.2	— 3.7
Milk	8.1	9.4	32.6	24.4	— 1.1	4.8	15.2
Cheese	25.9	28.0	28.1	37.5	24.0	—	—
Butter	64.3	53.2	59.0	39.3	42.6	75.7	62.3
Eggs	59.4	37.0	78.5	76.4	35.4	48.2	42.7
Potatoes	— 7.0	—21.0	19.1	35.9	7.4	4.8	18.3
Vegetables and fruit	12.7	5.2	—	—	—	—	—
Sugar	15.2	4.0	25.7	29.4	14.1	14.1	— 3.7

An examination of the table shows first the unique position of Colombia, in that for every food group and food item an increase in consumption appears as income per consumption unit increases. The explanation is doubtless that the group surveyed in that country was one of relative poverty, including peons, day labourers, and wage earners, with the result that with increased income the families increased their consumption per unit of every item. Milk, milk products, and eggs, and meats and fish showed the highest increases.

Leaving Colombia out of account, the trends in the different groups are quite different. Milk, cheese, butter, and eggs all show positive indices, butter and eggs having the highest. The item of meat and fish also shows substantial increases. Vegetables and fruit show slight increases in the four countries for which a figure is calculated, while sugar shows increased consumption in all countries except one, Czecho-Slovakia, where the trend is substantially horizontal. The direction of increased consumption—that is, the food groups in which consumption increases most as income per consumption unit increases—is thus clearly indicated.

The other groups show irregular trends. Fats and oils, including margarine, show decreases in five of the seven countries, the principal exception being Poland, where increased income leads to increased consumption of fats. The group of bread and cereals shows decreases for six of the seven countries, the exception being again Poland, where the trend is approximately horizontal. For bread alone, Poland shows a decreasing consumption as income increases, but Finland and Sweden show increases in consumption. The consumption of potatoes shows an increase in four of the seven countries as income per unit increases.

The preceding statements are for wage earners' families. Examining the indices for non-manual workers, substantially the same conclusions are found. Data are available for four countries and seven groups. For milk, milk products, and eggs, the general direction is positive, though the size of the indices, in other words the rate of increased consumption with a uniform rate of proportionate increase of income, is somewhat less than for wage earners. Meat and fish likewise show increasing trends, but in this case the size of the index appears to be roughly equal to that of the index for wage earners. Vegetables and fruit and sugar show increasing trends. On the other hand, bread and cereals decrease in all but two groups, and bread alone in all but one. Fats decrease in all but one group. Potatoes show increases in five of the seven groups.

In table VI indices are shown for four countries in terms of income per family instead of income per consumption unit. Unfortunately, the indices are not comparable with those presented in table V, since income per family brings together in a group of high-income families those with large incomes but small size as well as those with large incomes and large numbers of persons—that is, with smaller incomes per consumption unit. This classification therefore does not show so clearly the association between increased economic wellbeing and changes in diet. Nevertheless, in general, the conclusions based on table V are confirmed.

TABLE VI. INDICES OF RELATIVE CHANGE IN QUANTITIES OF SPECIFIED FOODS CONSUMED WITH CHANGES IN INCOME PER FAMILY IN 4 COUNTRIES[1]

Item	Wage earners				Salaried employees
	Estonia	Netherlands [2]	Switzerland (Zurich)	Union of South Africa [3]	Switzerland (Zurich)
Bread	— 0.6	—13.9	16.0	75.5	— 2.0
Bread, cereals, etc.	— 1.9	— 9.7	12.0	—16.7	— 1.8
Meat and fish	12.9	18.2	16.5	24.1	21.2
Fats	—10.4	—16.4	—123.5	—	—12.6
Milk	—23.1	— 1.6	— 5.5	82.4	— 3.7
Cheese	298.8	15.3	— 40.2	58.7	31.9
Butter	90.6	99.6	52.0	52.6	28.8
Eggs	137.9	30.4	15.0	101.1	28.4
Potatoes	—18.4	—14.9	— 7.2	1.2	—15.7
Vegetables and fruit	— 5.6	4.9	20.7	—	20.5
Sugar	22.0	11.7	6.7	—14.0	— 1.3

[1] With 100 per cent. increase in income per family the index shows the percentage of change in quantities consumed.
[2] Manual and non-manual workers.
[3] Wage earners and salaried employees.

Butter and eggs show an increased consumption as income increases. Cheese shows increases except in Switzerland, where consumption is high. Milk, on the other hand, shows an increase only in one case, the Union of South Africa, while in the Netherlands and Switzerland the index is not far from zero, and in Estonia it shows a downward trend. It should be noted that in the Union of South Africa milk consumption is low, while in the other cases it is high.

Meat and fish show moderate increases in consumption with increased income per family. Sugar shows increases in three of the four countries, and vegetables and fruit in two of these three cases.

Fats show decreases in consumption, bread and cereals decreases except in Switzerland, and potatoes decreases except in the Union of South Africa, where the trend was practically horizontal.

The table shows also the indices for salaried employees' consumption in Switzerland. No special comment is made, however, since it is the only country in which indices for non-manual workers can be given.

Further analysis and study of the detailed figures [1] reveal certain interesting points. The increase in the consumption of butter as income increases, as the high index of table V shows, is sharp and rapid;

[1] The data are not published here.

it is accompanied in some cases by a decrease in the consumption of margarine. But where the amount of butter consumed is large the rate of increase falls off and a decrease may even appear. For milk also, as the rate of consumption approaches a high figure the consumption may fall off as income increases further. Thus, in Germany there is little increase in the consumption of milk per unit for salaried employees' families receiving over 1,200 marks and for civil servants' families receiving over 2,200 marks.

With regard to the group of meat and fish, the following details of changes in consumption of the individual items as income increases are of interest.

In general, the increase in the consumption of fish, as income increased, was much less rapid than in the case of meat. In a few cases, however, the increase in the consumption of fish was more rapid. In three countries (Estonia, Denmark, and Poland) consumption showed a diminution as income increased.

In all countries for which figures are available, as income increased the consumption per unit of beef increased (with the exception of Switzerland and Denmark, where the income classification shows income per family). The consumption of beef about doubled in Germany, Estonia, Belgium, Finland, and Norway, and more than doubled in Poland and in Colombia, as the income increased from the lowest to the highest range for wage-earning families.[1] The increase was somewhat less than double in the Netherlands, Sweden, South Africa, and Czecho-Slovakia.

In the case of pork, consumption increased rapidly with added income, although in one country—the Netherlands—the upward movement was slight. In four cases, the consumption almost doubled within the range of income shown for working-class families; these were Germany, Belgium, Finland, and Poland. In two cases—Colombia and Norway—the increase was much greater than this proportion.

The trends shown for the consumption of mutton are somewhat less satisfactory than for other groups, since the average consumption of mutton was low in most countries. In two countries, consumption more than doubled; in Colombia, it increased fourfold; and in Poland sixfold. In Germany, Norway, and Czecho-Slovakia, consumption per unit doubled. In the case of Switzerland (wage earners) consumption remained approximately constant, while in Norway, as income increased, consumption of mutton decreased.

The consumption of veal showed remarkable uniformity in its upward movement with increasing income. All the countries for which figures are given show a sharp upward trend, consumption per unit more than doubling, with the exception of Switzerland.

Considerable diversity in the movement of consumption per unit was found in the case of ham and bacon. In two countries—Estonia and the Netherlands—consumption decreased as income increased. In Belgium, it remained approximately constant, while in Poland it doubled and in Norway and South Africa it more than doubled.

[1] This basis of comparison is to be understood also in the subsequent paragraphs wherever the increase of consumption as income increased is described.

With the exception of Poland, where a decrease occurred, all the countries showed a moderate increase in the consumption of sausages with increasing income. In Finland the consumption doubled.

Of the eight countries shown, all but one—Finland—showed an increase in consumption of preserved meats as income increased, and in about half of these cases the consumption was doubled.

In the case of Bulgaria, the consumption of poultry and other meats decreased with income. In Poland and Switzerland, it remained approximately constant. In Belgium, Finland, and Norway, consumption doubled, while in Colombia, Czecho-Slovakia, and the Netherlands, the consumption increased at an even greater rate.

All the foregoing statements on the relation of consumption to increasing income are made with special reference to the data for wage earners. In general, however, there appear to be no special comments to make for salaried employees and civil servants, since in the majority of cases the trends of consumption as income increased were parallel with those for wage earners.

Analysis of Diets [1]

An analysis of the diets in terms of constituent elements—namely, calories, and grammes of protein, fats, and carbohydrates — together with data showing whether these are of animal or vegetable origin, is presented in table VII. It should be noted that the figures for calories and for grammes of fats and carbohydrates have here been converted into the standard scale, as described above (p. 821), based on calorie requirements. Thus the figures, though still doubtless containing many points of difference as to methods of estimating the calories etc. in different investigations, are made reasonably comparable so far as the consumption unit scale itself is concerned. The data for grammes of protein are likewise expressed in terms of a standard scale, in this case a protein requirement scale. Since no international scale on this point has been adopted, that used by the United States Department of Agriculture in its appraisals of protein consumption has been employed here.[2]

The consumption in calories per consumption unit for wage earners' families varied from 2,799 in Poland to 3,773 in Sweden, and the calories of animal origin varied from 637 in Poland to 1,683 in Sweden.

The comparison of non-manual workers' and wage earners' families indicated a slightly larger consumption per unit in calories for the former group in Germany and Finland (salaried employees), identical

[1] See International Labour Office : *Studies and Reports*, Series B, No. 23, *op. cit.*, pp. 67-71. Table VII is based on table XIV of that report, modified by conversion into the standard calorie scale discussed above, p. 821.

See also " The Workers' Standard of Living " (International Labour Office : *Studies and Reports*, Series B, No. 30), pp. 36-37.

[2] This scale gives a weight of 1 for adults 20 years of age and over, a weight of 0.7 for children under 4, a weight of 0.8 for boys 4 to 6 years of age and for girls 4 to 7 years of age, a weight of 1.0 for boys of 7 and 8 and for girls of 8 to 10, and a weight of 1.1 for boys from 9 to 19 and for girls from 11 to 19. The basic requirement is set at 67 grammes of protein for an adult of average height and weight.

consumption in Finland (civil servants), and smaller consumption per unit in the Netherlands, Sweden, and Czecho-Slovakia. In interpreting these results, it must be remembered that the calorie requirements for heavy manual work are larger than those for office or clerical work.

TABLE VII. ANALYSIS OF DAILY DIETS IN TERMS OF CALORIES AND GRAMMES OF PROTEINS, FATS, AND CARBOHYDRATES, PER CONSUMPTION UNIT [1] FOR WAGE EARNERS' AND NON-MANUAL WORKERS' FAMILIES IN 11 COUNTRIES

Country	Date	Calories [1]		Proteins [2] (grammes)		Fats [1] (grammes)		Carbohydrates (grammes) [1]
		Total	Of animal origin	Total	Of animal origin	Total	Of animal origin	
		Wage earners						
Germany	1927–28	3,035	1,167	101.2	52.2	—	—	—
Austria	1925	2,992	1,176[3]	105.1	64.2[3]	104.2	93.1[3]	409.7
	1934	2,994	1,193	104.4	54.1	116.0	99.8	380.1
Estonia	1925	3,612	900[4]	137.9	71.4	—	—	—
United States (North Atlantic cities)	1934–37	3,342	—	—	—	—	—	—
Finland	1928	3,088	1,312[3]	—	—	—	—	—
Norway	1927–28	3,276	1,610	—	—	—	—	—
Netherlands	1935–36	3,479	1,029	125.6	57.7	122.8	—	465
Poland	1929	2,779	637	88.2	39.2	58.9	54.4	485.8
Sweden	1933	3,773	1,683	122.7	—	146	—	463
Czecho-Slovakia	1929–30	3,033	—	118.3	56.9	91.8	—	471.6
Union of South Africa [5]	1936	3,762	—	153	78	103	—	557
		Non-manual workers [6]						
Germany : S.E.	1927–28	3,097	1,242	103.6	55.6	—	—	—
C.S.		3,212	1,258	107.1	56.8	—	—	—
Finland : S.E.	1928	3,117	1,372	—	—	—	—	—
C.S.		3,080	1,454	—	—	—	—	—
Netherlands : Non-manual workers	1935–36	3,409	1,071	121.2	59.8	126.4	—	445
Sweden : Lower officials	1933	3,661	1,664	120.2	—	145	—	445
Middle class		3,675	—	122.7	—	148	—	433
Czecho-Slovakia : S.E.	1929–30	2,856	—	119.6	66.6	93.3	—	425.4
C.S.		2,812	—	124.6	74.8	101.0	—	394.3

[1] Figures per consumption unit as given in the sources converted by the International Labour Office into a standard consumption unit, based on calorie requirements as explained in the text, p. 821.
[2] Converted to protein requirement units, on the scale used in the United States Department of Agriculture (see p. 841).
[3] Calculated by the International Labour Office on the basis of the percentages given.
[4] Gross calories.
[5] The figure given is the average of the upper and lower limits as given in the source.
[6] S.E. = salaried employees ; C.S. = civil servants.

Protein consumption varied from 88.2 grammes in Poland to 153 grammes in the Union of South Africa per protein requirement unit for wage earners. For non-manual workers the amounts of protein consumed per unit were slightly higher in Germany and Czecho-Slovakia, and slightly lower in the Netherlands and Sweden, except that in cases of middle-class families in Sweden the amounts were identical.

Protein of animal origin consumed varied from 39.2 grammes per unit in Poland to 78 grammes in the Union of South Africa.

Data for fats and carbohydrates are available only for a comparatively small number of countries.

Table VIII presents certain facts showing variation in the consumption of calories and grammes of protein in the different income classes. In general, the conclusion is evident that with larger incomes the consumption increases remarkably. In Germany, for example, the range is from 2,679 calories per unit in the lowest income group for wage earners to 3,379 in the highest; in the United States (North Atlantic cities) from 2,610 to 4,500; in the Netherlands from 2,980 to 3,917; in Sweden from 3,321 to 4,149; and in the Union of South Africa from 3,358 to 4,033. Of course these increases may not correspond to increases in actual consumption, since with larger incomes larger proportions may be included in waste; but it is significant that the amounts increase. It is probable that the larger incomes do not coincide with heavier manual work, and hence the wage earners with the largest requirements for calories are not necessarily in the families with the largest incomes.

TABLE VIII. CALORIES AND GRAMMES OF PROTEIN PER CONSUMPTION UNIT IN DIFFERENT INCOME CLASSES[1] (WAGE EARNERS' FAMILIES) IN 11 COUNTRIES

Income group	Germany	Austria	Estonia	United States (North Atlantic cities)	Finland	Norway	Netherlands	Poland	Sweden	Czecho-Slovakia	Union of South Africa
	Calories per calorie requirement unit										
1 Lowest	2,679	2,672	3,539	2,610	2,461	2,918	2,980	2,243	3,321	2,938	3,358
2	2,934	2,856	3,672	2,960	2,950	3,218	3,160	2,702	3,558	3,143	3,529
3	3,027	3,067	3,457	3,290	3,148	3,564	3,324	2,984	3,815	2,848	3,498
4	3,141	3,271	3,617	3,660	3,321	3,653	3,543	3,137	3,978	—	3,939
5	3,379	3,504	3,782	4,080	3,440	3,990	3,600	—	4,054	—	3,889
6	—	—	—	4,500	3,532	—	3,771	—	4,149	—	3,923
7	—	—	—	—	3,389	—	3,917	—	—	—	4,033
8	—	—	—	—	3,532	—	—	—	—	—	—
	Grammes of protein per protein requirement unit										
1 Lowest	84.7	83.7	—	—	—	—	103.7	69.6	107.5	109.2	135
2	95.1	94.7	—	—	—	—	113.0	83.5	116.5	124.6	140
3	101.0	114.0	—	—	—	—	117.1	94.8	123.8	126.6	141
4	106.4	122.8	—	—	—	—	129.4	107.7	128.9	—	160
5	117.2	140.4	—	—	—	—	132.9	—	132.6	—	158
6	—	—	—	—	—	—	139.2	—	136.4	—	166
7	—	—	—	—	—	—	143.3	—	—	—	170

[1] The income classes (per consumption unit and per year unless otherwise noted) for the different countries are as follows: Germany: less than 800 marks, 800-1,000, 1,000-1,200, 1,200-1,500, 1,500 and over; Austria (per day): less than 1.50 schilling, 1.51-2.00, 2.01-2.50, 2.51-3.00, 3.01 and over; Estonia (income per family): less than 6,000 marks, 6,000-8,000, 8,000-10,000, 10,000-12,000, 12,000 and over; United States (weekly food cost per head): $1.25-1.87, 1.88-2.49, 2.50-3.12, 3.13-3.74, 3.75-4.37, 4.38 and over; Finland: less than 3,750 marks, 3,750-5,000, 5,000-6,250, 6,250-7,000, 7,000-8,750, 8,750-10,000, 10,000-11,500, 11,500 and over; Norway: less than 900 kr., 900-1,299, 1,300-1,699, 1,700-2,099, 2,100 and over; Netherlands (daily food cost per consumption unit): 0.30-0.35 florins, 0.35-0.40, 0.40-0.45, 0.45-0.50, 0.50-0.55, 0.55-0.60, 0.60-0.70; Poland: less than 600 zloty, 600-899, 900-1,199, 1,200 and over; Sweden: less than 700 kr., 700-950, 950-1,200, 1,200-1,450, 1,450-1,700, 1,700 and over; Czecho-Slovakia: 2,000-6,000 crowns, 6,000-12,000, 12,000 and over; Union of South Africa (income per family): under 125, 175-200, 250-275, 325-350, 400-425, 475-500, 575-600.

In regard to two countries, the United States and Sweden, comparative data on the amounts per unit consumed of three minerals—phosphorus, calcium, and iron—and of four vitamins—A, B_1, B_2, and C—are available. These data are in terms of consumption units, a special scale being used in the case of each element, so that the amounts available of phosphorus are shown in terms of phosphorus requirement units, of calcium in terms of calcium requirement units, etc. The scales adopted are those of the American study, in the absence of international agreement on the units and scales to be adopted, and the Swedish data have been converted into the equivalent American units by means of conversion factors.[1]

TABLE IX. AVERAGE NUTRITIVE INTAKE PER REQUIREMENT UNIT [1] PER DAY OF CERTAIN MINERALS AND VITAMINS IN WAGE EARNERS' AND LOWER SALARIED EMPLOYEES' FAMILIES IN 2 COUNTRIES

Country	Income group	Phosphorus (grammes)	Calcium (grammes)	Iron (milligrammes)	Vitamin A (International units)	Vitamin B_1 (International units)	Vitamin C (International units)	Riboflavin[2] (milligrammes)
United States (North Atlantic cities)	Weekly food expenditure per head :							
	$1.25–1.87	1.07	0.44	11.3	2,100	340	820	1.4
	1.88–2.49	1.25	0.54	13.3	2,800	420	1,140	1.7
	2.50–3.12	1.46	0.85	15.4	3,400	500	1,410	2.1
	3.13–3.74	1.63	0.73	17.3	4,200	580	1,740	2.4
	3.75–4.37	1.80	0.85	20.3	5,900	680	2,000	2.8
	4.38 and over	2.00	0.91	21.0	7,200	710	1,900	3.2
	Total	1.38	0.65	14.6	3,274	471	1,302	1.9
Sweden	Income :							
	Less than 3,000 kr.	1.55	1.45	11.3	4,211	305	1,138	—
	3,000–5,000	1.62	1.48	13.7	4,458	298	1,197	—
	5,000 kr. and over	1.60	1.42	13.9	5,114	286	1,315	—
	Total	1.61	1.46	13.7	4,584	298	1,216	—

[1] For scales used for each of the requirement units, see below.
[2] Or lactoflavin, one of the elements in the B_2 vitamin complex.

[1] The phosphorus scale : adults 20 years of age and over are given a rating of 1.0 ; boys under 9 years of age are rated 0.8 ; 9-12 years of age, 0.9 ; 13-19, 1.0 ; girls under 11 years of age are given a rating of 0.8 ; girls 11-19, 0.9. (The standard consumption is set at 1.32 grammes per unit.) The calcium scale (standard consumption, 0.68 grammes per unit) : males 20 years and over, 1.0 ; children under 20, 1.5 ; females 20 years and over, 1.3. Iron scale (standard consumption 15 miligrammes per unit) : adults 20 years of age and over are rated at 1.0 ; children under 4 are given a rating of 0.4 ; boys 4-6, 0.5 ; 7-8, 0.7 ; 9-10, 0.8 ; 11-12, 0.9 ; 13-19, 1.0 ; girls 4-7, 0.5 ; 8-10, 0.7 ; 11-13, 0.8 ; 14-19, 0.9. Vitamin A scale (standard 6,000 international units for adults 14 years of age and over) : for boys under 7, 0.75 ; 7-10, 0.90 ; 11-13, 1.0 ; girls under 8, 0.75 ; 8-13, 0.9. Vitamin B_1 (standard 500 international units) : adults 20 years and over rated as 1.0 ; children under 4 rated 0.40 ; boys 4-6, 0.50 ; 7-8, 0.70 ; 9-10, 0.80 ; 11-12, 0.83 ; 13-15, 1.0 ; 16-19, 1.2 ; girls 4-7, 0.50 ; 8-10, 0.70 ; 11-13, 0.80 ; 14-19, 0.83. Vitamin B_2 (G) (standard 600 Sherman units or 1.8 milligrammes of Riboflavin (lactoflavin)) : for adults

Table IX gives for these two studies the relative amounts of each of these minerals and vitamins available per unit classified according to income groups. As income increases the amounts available of these necessary elements increase for each element in each country except for Vitamin B in Sweden, where the amounts consumed decrease with larger incomes. So far as the comparison between the groups is concerned, if the figures can be accepted as relatively equivalent, the Swedish average consumption appears to be not far from the same as the average consumption in the United States data. It must be emphasised, however, that comparisons between countries are hazardous because of the different methods of dietary analysis used and because of variations in estimating waste and differences in tables of mineral and vitamin content of different foodstuffs.

Consumption of Items other than Food

It would be of great interest to analyse also the available data on quantities consumed of other articles than food. Unfortunately, the materials available in the several studies are fragmentary, and comparative tables showing the consumption of specific articles would be of limited scope. Difficulties also arise in converting data on expenditure to data on quantities consumed or goods utilised. For consumption analysis the point of primary importance is the use or possession of the article, while the amounts expended, though important as throwing light upon the quality of the installation, are difficult of interpretation in view of the different types of expenditure which may be included.[1]

Furthermore, to secure adequate data on quantities or articles consumed the enquiry must be so planned as to cover these specific points, and in many family living studies either the data secured or the tabulation of the data fails to afford specific information.

With regard to housing, many family living studies cover the details of the type of house occupied, the number of rooms, their size, bathroom, and the services furnished and paid for in the rent—for example, hot water, heating, etc. The International Labour Office has made a series of such enquiries into rents and housing, from which data on differences in housing can be derived.[2] Data on housing are

14 years of age and over, 1.0 ; boys under 7, 0.75 ; 7-10, 0.90 ; 11-13, 1.0 ; girls under 8, 0.75 ; 8-13, 0.90. *Vitamin C (standard 1,000 international units)* : adults 20 years of age and over, 1.0 ; boys under 9, 0.7 ; 9-10, 0.8 ; 11-12, 0.9 ; 13-15, 1.0 ; 16-19, 1.2 ; girls under 11, 0.7 ; 11-13, 0.8 ; 14-19, 0.9. (Compiled from United States Department of Agriculture Circular No. 507, Hazel K. Stiebeling and Esther F. Phipard : *Diets of Families of Middle Class Wage-earners and Clerical Workers in Cities.* U.S. Govt. Printing Office, Washington, 1939.)

[1] For example, the use of a telephone is indicated by expenditure on telephone rent ; the use of a radio by expenditure on purchase, on instalment payments, or on licences, or for a tax on installation ; the use of a bicycle by amounts paid for purchase, for maintenance, for instalment payments, for licences, etc. ; the use of an automobile by similar items.

[2] See, for example, *International Labour Review*, Vol. XXXVIII, No. 6, Dec. 1938 : " Rents of Workers' Dwellings in Various Towns, 1936-37.

also available in some countries on a much more extensive scale in special housing censuses.[1]

The data on fuel and light covering expenses on gas, electricity, and fuels, often contain information as to equipment and conveniences —for example, provision of electric light, refrigerator, electric washing machine, vacuum cleaner, and other devices to lighten housework. However, most family budget studies have not yet extended their scope to include a survey of the equipment of households, and the character of the data obtained on the different uses of electric current is apt to be limited to the allocation of expenses between, say, fuel and light, clothing (cleaning), and miscellaneous items, rather than to the provision of data on the equipment of the household.

Similarly, data on miscellaneous items may contain important information on the use of a telephone, radio, automobile, bicycle, etc., but the information is apt not to be in the form of an analysis of articles but to be limited to data on expenditures. Here again, data on consumption are often available from other sources.

In summary, then, it must suffice for the present to call attention to these possibilities of further analysis of some items, since the data available on these points are scarcely of sufficient scope and value to justify their inclusion in the present article.

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[1] See, for example, the summary statement in "The Workers' Standard of Living" (INTERNATIONAL LABOUR OFFICE: *Studies and Reports*, Series B, No. 30), pp. 43-47.