

1973 HOUSEHOLD BUDGET SURVEY

SPECIAL FEATURES AND RESULTS

D. C. Murphy

(Read before the Society, May 20, 1976)

INTRODUCTION

The first report¹ on the large scale national Household Budget Survey (HBS) conducted by the Central Statistics Office (CSO) during 1973 was published earlier this month. It is, therefore, particularly opportune to have been invited by the Society to read a paper tonight on the HBS. At the outset I will briefly trace the historical development of these surveys and discuss some of the interesting methodological features of the 1973 national inquiry. After a brief look at the published results of the 1973 results I will examine the changes in Irish expenditure patterns over time and make comparisons with the results of a similar inquiry in the UK. I will then illustrate some important uses of the 1973 results by examining special categories of households (e.g., pensioner, family units), by considering the updating of Consumer Price Index (CPI) weights and by providing preliminary estimates of expenditure elasticities. I conclude by summarising the current position of the HBS and its future development.

PREVIOUS HOUSEHOLD BUDGET SURVEYS

Prior to the 1973 HBS only three official surveys of household budgets had previously been conducted in this country in 1922, 1951-52 and 1965-66.

1922 Survey

The 1922 survey is now only of historical and academic interest. Because of the disturbed state of the country and other reasons only 308 usable returns were collected. The results were used to weight the first index of consumer prices for this country². A further survey was planned for the end of the 1930s to update the index weights, but this had to be postponed because of the abnormal expenditure patterns during 1939-45 and subsequent years. By 1951 household consumption was considered to have stabilised into post-war patterns and a comprehensive HBS was initiated by the CSO in January, 1951 and continued until September, 1952.

1951-52 Survey

The 1951-52 HBS³ was the first survey of household expenditure and income conducted in this country using modern sample survey techniques. Fieldwork was restricted to urban areas and was conducted by full-time and voluntary field personnel. The total number of household returns ultimately used was 12,300; these consisted mainly of sets of four returns made by a random sample of approximately 3,700 households covering a period of one week in four consecutive calendar quarters. The correlation resulting from the use of separate returns from the same household meant that the sampling errors of the derived estimates were higher than those which would have been obtained if 12,300 independent household returns had been used. This approach did simplify field work and ensured very high response in the second and subsequent quarterly fieldwork cycles. However, the most significant feature of the 1951-52 was that it pioneered the use in this country of questionnaires and expenditure diaries for data collection purposes. This interview/diary approach has been basically retained unchanged to-date.

1965-66 Survey

The 1965-66 HBS⁴ was again restricted to urban areas. Fieldwork extended from September, 1965 to October, 1966 and was conducted by a team of full-time field personnel. A total of 4,759 household returns were realised; these consisted mainly of sets of two returns (including diary records for a period of fourteen consecutive days) completed by a sample of approximately 2,400 households at a six-month interval. The organisation of the survey into two separate six-month cycles again facilitated field work but, as in 1951-52, the sampling errors of the derived estimates were increased because of the correlation between the first and second cycle returns made by the same household.

1973 HOUSEHOLD BUDGET SURVEY

Principal Features

The results of the 1973 HBS are based on single returns (including diary records for a period of fourteen consecutive days) received from a national sample of 7,748 co-operating urban and rural households throughout the country. All classes of private households had an equal chance of being selected. For operational reasons fieldwork commenced gradually during November, 1972 and terminated early in 1974. A special team of full-time field personnel was recruited and trained to undertake the survey. The now trad-

itional combination of household questionnaires, personal questionnaires and personal expenditure diaries was used to collect the household expenditure and income data.

The most significant feature of the survey was the inclusion of *rural* as well as *urban* households for the first time in an Irish survey of this type. The 1973 results are, therefore, of particular interest because they give expenditure patterns for all households in the State and provide a basis for the first ever comparison of urban and rural standards of living. The extent of these differences can be examined in the first summary report on the 1973 survey published earlier this month. This initial report is *summary* only in the sense that household expenditure is summarised under 54 headings in most constituent tables. The report is, in fact, comprehensive in scope since the results are classified in respect of all the most important household characteristics for the State (as a whole), urban areas, rural areas and rural farm households. One table was incorporated in the initial report summarising household expenditure patterns for these four classes of households under 341 individual expenditure headings. This represents the maximum expenditure detail coded in the 1973 HBS. Further reports on the 1973 survey are planned. These will relate to the State (as a whole), urban and rural areas, respectively, and will contain the detailed information on expenditure patterns together with estimates of average household income accruing from different sources.

Methodology

The methodology of the 1973 HBS was basically identical to that used in the 1965-66 urban survey; it is described in some detail in the initial report. However, I shall briefly discuss certain aspects of the rural coverage since it was undertaken for the first time in 1973 and presented serious methodological and practical problems particularly in respect of the estimation of farming income. The problems involved in extending the traditional urban coverage of earlier surveys to include rural areas had been the subject of research and investigation by Sheehy and O'Connor⁵ during 1970-71. The basic conclusion reached by Sheehy and O'Connor was that extension of the HBS to rural areas was feasible, but that farming income in the case of:

- (a) *small* farms could be accurately estimated on the basis of data collected on a single visit;
- (b) *medium-to-large* farms could only be accurately estimated using detailed farm accounts maintained by experienced Farm Surveyors for a full accounting year.

This conclusion was accepted by the CSO and the 1973 HBS was designed accordingly. Analysis of farm activity levels and the available resources indicated that the delineation between *small* and *medium-to-large* for this purpose would have to be set at 30 acres. It was appreciated that the level of activity on some *medium-to-large* farms defined in this fashion would not be sufficient to justify the maintenance of detailed accounts; equally well it was realised that certain *small* farms would be so intensely worked that accurate estimates of their farming income would require detailed accounts. Subsequent events proved this point, but the number of latter cases encountered was not sufficient to significantly effect the estimation of average farm income.

In addition to 28 Household Budget Interviewers a special team of seven Farm Surveyors and one Field Supervisor was recruited and trained to complete the farm accounts phase of the 1973 HBS. All farm accounts personnel had an agricultural background and

most held agricultural degrees or diplomas. The Farm Accounts Books were designed along the lines of those used in the National Farm Survey conducted by the CSO during 1955-56, 1957-58.

The Farm Surveyors were appointed at an early stage so that they would initiate Farm Accounts on the specified quota of *medium-to-large* farms as early as possible. Individual Surveyors were intended to handle between 150 and 180 separate accounts, the number varied because allowance had to be made for differences in the geographic dispersal of individual assignments of survey areas. These areas were systematically surveyed during the successive cycles of farm accounts visits made to co-operating farms. Farm Surveyors visited each of these farms on at least *four separate occasions* during the twelve months accounting period.

The initial cycle of farm accounts visits lasted approximately five months since Farm Surveyors were not familiar with their areas, had to canvass the co-operation of the required sub-quotas of *medium-to-large* farms for the survey as a whole (i.e., both the farm accounts and household budget phases), and had to complete the opening inventories of stocks, products, supplies, etc. in each co-operating case. Household Interviews subsequently called (one to twelve months later) on these *medium-to-large* farm households to complete the standard household budget part of the survey - i.e., collection of expenditure and non-farm income data. The second and third cycles of farm accounts visits took approximately three and a half months to complete, these were concerned only with updating individual farm accounts. The closing inventory visits were made twelve months after the initiation of accounts and took approximately four months to complete. Close liaison was maintained by the Household Interviewer and Farm Surveyor visiting the same household. The Surveyors secured the co-operation of these *medium-to-large* farm households and were, therefore, able to identify their location for the Interviews and also advised them beforehand on the situation and problems which they would encounter.

The farm accounts phase of the 1973 HBS was quite successful. Some farmers discontinued participating in the maintenance of accounts during the twelve months accounting period. In cases where the household phase of the survey had been completed the household was treated as co-operating and its farm income was estimated from the partial accounts. In cases where the Household Interviewer had not yet called the household was eliminated. In neither case was it possible to introduce substitute *medium-to-large* farm households since there would not have been adequate time to maintain accounts for a full twelve month period. There were also instances where, although it was possible to have accounts completed, it was not possible to complete the household budget portion of the survey. In these instances the household was treated as a non-respondent for HBS, but the Farm Surveyor generally completed the farm accounts since these accounts are also being analysed separately for agricultural statistics purposes. In all, Farm Surveyors canvassed the co-operation of a random sample of 1,905 *medium-to-large* farms of which 1,146 (60 percent) agreed initially to participate in both the *farm accounts* and *household budget* phases of the HBS. A total of 927 (49 percent) satisfactorily completed sets of household and farm accounts were ultimately realised for the HBS.

Because of the inclusion of rural areas and the necessity to keep farm accounts in certain cases the design of the 1973 HBS and the organisation of fieldwork presented serious problems. The particular approach adopted conveniently integrated the household

and farm accounts phases of the survey in rural areas at a minimum cost; it is described in detail in the published report. Farm Surveyors worked only in "country" survey areas which covered towns with less than 1,000 inhabitants and rural areas. *Small* farm households in these areas were dealt with by the Household Interviewer, who obtained the required farm income details on a special interview questionnaire along with the household budget particulars she normally collected. Household Interviewers also handled all farm (small, medium or large) households in "urban" survey areas (i.e., located in towns with 1,000 inhabitants or more) in the same manner. A total of only 61 co-operating farm households were, however, surveyed in urban areas. Household Interviewers also had to ensure that the home consumption of farm or garden produce was accurately accounted for by the housewife and, although practical problems were encountered, this aspect of the survey did not present serious difficulties. Cost considerations present the major problems in rural surveys of any type. In the 1973 HBS the relative *urban* and *country* survey area field costs per completed return from co-operating household were estimated to be of the following order:

<i>Sample Divisions</i>	<i>Relative Cost per return</i>
(a) "Urban" survey area:-	
Average household	1.0
(b) "Country" survey area:-	
Household - no farm accounts	1.4
Household - with farm accounts	5.7
Average country household	2.5

These figures show that, given the extra travelling involved, the average field cost of securing a completed return from co-operating households with no farm accounts in country survey areas was approximately 40 percent higher than the equivalent cost in urban areas. The maintenance of farm accounts was a very expensive operation and in such cases the average field costs per co-operating household were approximately six times the average urban cost. When the farm accounts field costs were averaged over all co-operating households in country survey areas the average cost per return was still two and a half the average cost per return in urban areas. To put these figures in true perspective it is estimated that the 1973 national sample could have been increased by 3,400 households for the cost of 927 completed farm accounts secured in the country survey areas.

Non-Response and Correction by Reweighting

The stratified sampling design and the use of substitute sample households by Interviewers to secure as closely as possible the co-operation of the fixed quota of 28 households in urban areas and specified subquotas of non-farm, *small* farm and *medium-to-large* farm households in country survey areas ensured that, by and large, the final sample was proportionally distributed over different geographic areas with the correct balance of urban and rural households. However, the overall effective response rate for the survey was only 57 percent and this gave ample scope for differential response. As in previous surveys, the data for individual households in the final sample were specially reweighted to correct as

far as possible for any over-or under-representation of particular types of households resulting from differential response rates (or possibly from the operation of the sampling plan).

Despite considerable publicity coupled with the payment of a gratuity of £1 to each person aged fifteen years and over and the use of full-time Interviewers the overall response was 57 percent which was disappointing. Response actually varied from 49 percent for the *medium-to-large* farms (who participated in both the household budget and farm accounts phases of the survey), 71 percent for other households in country survey areas; and 52 percent for urban areas. The urban response was substantially lower than the equivalent response rate of 66 percent achieved in the 1965-66 urban survey. This would indicate that there had been significant deterioration in the willingness of the public to participate in this type of comprehensive survey relating to personal matters. Reliable information on differential response is very limited. The response rates quite clearly show the rural households were far more co-operative than their urban counterparts. The low response for the *medium-to-large* farm households is of course, explained by the fact that they were asked effectively to participate in two separate surveys (i.e., provision of household and farm accounts data).

The reweighting process used to correct for differential response is described in detail in the published report. The household frequencies within detailed sub-classifications of the sample were effectively adjusted to conform with the corresponding 1971 Census distribution of households. The following characteristics were used to specify the detailed sub-classifications of households which were separately adjusted:

- (a) *Urban households* - household size, town size and social group of head of household;
- (b) *Rural non-farm households* - household size, provincial location and social group of head of household;
- (c) *Rural farm households* - household size, provincial location and acreage farmed.

The proportional adjustments effected by the reweighting process within each of the sub-classifications distinguished in this fashion are specified in detail in the published report. However, they are conveniently summarised in Table 1 so that the basic underlying adjustments made are more readily distinguishable. The greatest increase in weighting was necessary in respect of rural farm households which were under-represented in all acreage classes. This was principally due to the fact that any *medium-to-large* farm which dropped-out of the maintenance of farm accounts could not be substituted for. The under-representation was not very pronounced for large households. Urban households consisting of a relatively small number of people, those in social groups* 1, 2, 6 and those located in the Dublin region and in the small towns under 1,500 inhabitants were also under-represented. On the other hand, without reweighting there would have been a serious over-representation of rural non-farm households. This over-representation was due to the fact that in instances where the co-operation of the specified sub-quota of *medium-to-large* farms had not been realised by the Farm Surveyor (due to refusals or drop-outs) the relevant Interviewer still tried to achieve the required overall area quota of 28 completed returns by securing the co-operation of other households.

* Social groups defined in Table 4.

Table 1: *Proportional adjustments effected by weighting in 1973 HBS.*

Category	Urban	Rural non-farm	Rural farm	Total State	Category	Urban	Rural non-farm	Total urban and non-farm households
Household size					Social group*			
1-2 persons	1.03	0.91	1.36	1.06	1	1.02	1.06	1.03
3-4	1.01	0.93	1.20	1.03	2	1.04	0.86	1.01
5-6	0.96	0.83	1.09	0.96	3	0.85	0.64	0.79
7+	0.88	0.77	1.13	0.90	4	0.91	0.80	0.89
					5	0.97	0.73	0.88
Total	0.99	0.88	1.22	1.00	6	1.19	1.06	1.11

Category	Urban	Category	Rural non-farm	Rural farm	Total rural	Category	Rural farms
Town size**		Location				Acreage farmed	
Dublin and Dun Laoire	1.06	Lemster	0.85	1.37	0.99	0-30	1.19
Towns 10,000+	0.86	Munster	0.89	1.20	1.03	30-50	1.29
Towns 1,500-5,000	0.89	Connacht				50-100	1.15
Towns under 1,500	1.14	(pt.) Ulster	0.90	1.16	1.04	100+	1.28
Total	0.99	Total	0.88	1.22	1.02	Total	1.22

* Social groups defined in Table 4

** Including suburban areas as defined in 1971 Census of Population

The effect of the reweighting process on the sample frequencies is shown at the top of each table in the published report where both the *actual* and *adjusted* frequencies are provided. The overall effect of reweighting on the actual derivation of results is given in Table 2 which distinguishes weighted and unweighted figures for comparison purposes. As can be seen the disparities between the two sets of figures are not very substantial at these aggregate levels - for example, the average household expenditure for the State was reduced by only 2 percent as a result of the weighting process. However, an analysis along these lines extended to detailed sub-classifications could show much larger reductions or increases.

PUBLISHED 1973 HBS RESULTS

Principal Features

The principal features of the 1973 HBS results are summarised in Table 3. The total recorded average weekly household expenditure in the State in 1973 amounted to £41.03. For *urban* households the level was higher at £45.04, while for *rural* households the average was £35.81. The average expenditure of *rural farm* households was £35.84 per week; this figure includes £3.42 for consumption of own farm produce (valued at retail prices) so that the average weekly *cash* outlay was £32.42. The consumption of own farm or garden produce was much lower (£0.77 per week) for other rural households and negligible in urban areas.

Table 2: *Weighted and unweighted HBS results, 1973.*

Item Description	Urban areas			Rural areas			State		
	Weighted	Unweighted	Difference	Weighted	Unweighted	Difference	Weighted	Unweighted	Difference
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Number of households in sample	4,451	4,451	-	3,297	3,297	-	7,748	7,748	-
Adjusted number of households in sample after reweighting	4,385	4,451	-66	3,363	3,297	+66	7,748	7,748	-
Household size									
Males	1.944	2.021	-0.077	2.078	2.143	-0.065	2.002	2.073	-0.071
Females	2.121	2.176	-0.055	1.858	1.941	-0.083	2.006	2.076	-0.070
Total	4.065	4.197	-0.132	3.936	4.085	-0.149	4.009	4.150	-0.141
Household expenditure	£	£	£	£	£	£	£	£	£
Food	13.152	13.442	-0.290	13.177	13.377	-0.200	13.163	13.415	-0.252
Alcoholic drink	2.175	2.242	-0.067	1.467	1.495	-0.028	1.868	1.925	-0.057
Tobacco	1.930	1.987	-0.057	1.762	1.807	-0.045	1.857	1.910	-0.053
Clothing and footwear	4.266	4.371	-0.105	4.601	4.728	-0.127	4.411	4.523	-0.112
Fuel and light	2.181	2.206	-0.025	1.689	1.731	-0.042	1.967	2.004	-0.037
Housing	4.145	4.169	-0.024	1.373	1.437	-0.064	2.942	3.007	-0.065
Household non-durables	0.768	0.782	-0.014	0.599	0.621	-0.022	0.695	0.714	-0.019
Household durables	2.157	2.157	-	1.716	1.738	-0.022	1.966	1.979	-0.013
Miscellaneous goods	1.557	1.561	-0.004	0.909	0.949	-0.040	1.276	1.301	-0.025
Transport	5.171	5.212	-0.041	4.496	4.631	-0.135	4.878	4.964	-0.086
Services and other expenses	7.538	7.657	-0.119	4.018	4.109	-0.091	6.010	6.147	-0.137
Total	45.041	45.787	-0.746	35.808	36.624	-0.816	41.033	41.888	-0.855

Table 3: Summary of 1973 HBS results classified by urban/rural location.

Item Description	Urban areas	Rural areas				State				
		Farm households	Other	All rural						
	No.	No.	No.	No.	No.					
Number of households in sample	4,451	1,456	1,841	3,297	7,748					
Adjusted number of households in sample after reweighting	4,385	1,766	1,597	3,363	7,748					
Household size										
Males	1.94	2.17	1.97	2.08	2.00					
Females	2.12	1.83	1.89	1.86	2.01					
Total	4.06	4.00	3.86	3.94	4.01					
Weekly household expenditure	£	%	£	%	£	%	£	%	£	%
Food	13.15	29.2	14.04	39.2	12.22	34.2	13.18	36.8	13.16	32.1
Alcoholic drink	2.18	4.8	1.46	4.1	1.48	4.1	1.47	4.1	1.87	4.6
Tobacco	1.93	4.3	1.74	4.9	1.78	5.0	1.76	4.9	1.86	4.5
Clothing and footwear	4.27	9.5	5.09	14.2	4.06	11.4	4.60	12.9	4.41	10.7
Fuel and light	2.18	4.8	1.50	4.2	1.90	5.3	1.69	4.7	1.97	4.8
Housing	4.14	9.2	0.98	2.7	1.81	5.1	1.37	3.8	2.94	7.2
Household non-durables	0.77	1.7	0.58	1.6	0.62	1.7	0.60	1.7	0.70	1.7
Household durables	2.16	4.8	1.81	5.0	1.61	4.5	1.72	4.8	1.97	4.8
Miscellaneous goods	1.56	3.5	0.88	2.4	0.94	2.6	0.91	2.5	1.28	3.1
Transport	5.17	11.5	4.17	11.6	4.85	13.6	4.50	12.6	4.88	11.9
Services and other expenses	7.54	16.7	3.60	10.1	4.48	12.5	4.02	11.2	6.01	14.6
Total	45.04	100.0	35.84	100.0	35.77	100.0	35.81	100.0	41.03	100.0
Retail value of own consumption (included above)	£		£		£		£		£	
	0.05		3.42		0.77		2.16		0.97	

Table 4. Total average weekly household expenditure, 1973 classified by principal household characteristics.

Characteristics	Urban areas	Rural areas	State	Characteristics	Urban areas	Rural areas	State
All households	£ 45.04	£ 35.81	£ 41.03	Planning region	£	£	£
Household size	£	£	£	Eastern	48.77	43.21	48.06
1 person	14.19	10.75	12.67	South Eastern	38.64	37.27	37.96
2 persons	31.80	22.76	27.37	South Western	42.21	38.91	40.63
3 ..	43.94	33.60	39.09	Mid-Western	41.27	35.00	37.61
4 ..	53.72	41.27	49.07	Western	40.07	35.51	36.89
5 ..	55.31	45.88	51.77	Donegal & North Western	39.00	28.43	31.33
6 ..	57.23	49.52	54.19	Midlands	36.79	34.15	34.83
7 ..	59.92	57.64	58.93	North Eastern	47.85	31.51	37.83
8 ..	65.58	64.37	65.09	Household tenure	£	£	£
9 ..	69.22	60.02	64.53	Owned outright	41.84	35.69	37.62
10+ ..	69.10	65.90	67.55	Owned with mortgage	56.66	41.67	53.14
Gross weekly household income	£	£	£	Rented from Local Authority	36.92	32.10	38.46
Under £7	9.28	12.50	11.00	Rented other	37.16	32.07	36.45
£ 7 and under £10	14.12	13.64	13.84	Rent-free	29.08	24.98	26.63
£10 £15	18.29	18.05	18.16	Social group of head of household	£	£	£
£15 £20	22.85	22.40	22.59	1-professional, employer or manager	64.08	58.07	63.19
£20 £25	29.54	28.33	28.92	2-salaried employee and intermediate non-manual	48.70	46.54	48.43
£25 £30	32.58	33.05	32.80	3-other non-manual	42.72	40.43	42.25
£30 £40	40.60	37.76	39.53	4-skilled manual	47.68	42.94	46.65
£40 £50	50.82	46.07	49.23	5-semi and unskilled manual	38.86	37.10	38.32
£50 £60	57.38	52.51	55.61	6-farmers, agricultural workers and others	21.05	32.87	30.58
£60 £70	64.56	55.00	61.07				
£70 £80	72.15	61.26	68.18				
£80 and over	88.80	71.24	82.03				

The expenditure patterns (summarised under 54 headings) for the State, urban areas, rural areas and rural farm households are classified by all important household characteristics. These are analysed in detail in the published report with particular attention given to the comparison of urban and rural patterns which have become available for the first time. Total average weekly expenditure for the principal sub-classifications of results given in the report are shown in Table 4 to demonstrate the underlying urban/rural differences in the level of household expenditure. In interpreting expenditure totals and the breakdowns provided in the report due account should, of course, be taken of average household size with which the level of expenditure is directly related.

The distribution of households across the classifications in Table 3 and other classifications used in the survey is given by the *adjusted number of households in sample after reweighting* appearing at the top of each table. In some instances households were initially classified in greater detail than that published. For the convenience of users the percentage distributions of households in the State are given in Appendix 1 for the maximum detail sub-classifications of the following household characteristics:

<i>Characteristics</i>	<i>Detail distinguished on Appendix 1</i>
(1) Household tenure	10 sub-classifications
(2) Social group of head of household	12
(3) Gross weekly household income	20
(4) Disposable weekly household income	20
(5) Gross weekly income of head of household	20
(6) Social welfare pensions	9
As a % of gross	
(7) Unemployment benefits	8
weekly household	
(8) Total state transfer payments	10
income	

In the case of distributions involving households income it should be noted that income was understated to some degree in the survey. On average total *recorded* weekly household expenditure (£41.03) exceed the *stated* disposable weekly household income (£36.16) by some 13.5 percent. However, the bulk of this apparent deficit may be due more to the conceptual differences between the two figures and to the practical difficulties which some people (e.g., self-employed) had in quantifying their income, rather than due to the intentional understatement of income on a large scale. We can only surmise on this point as there is no way of determining the actual understatement or how its incidence varied with different types of households. No adjustments were made either to the stated or estimated incomes or to the ranges used for classification purposes. Consequently, it is possible that certain households have been assigned to slightly lower ranges than would have been appropriate if their *true* income was available. This would, of course, mainly effect households at the extremities of these ranges and, therefore, some tolerance must be attached to the specification of income ranges in the interpretation and use of the income distributions given in Appendix 1.

Total Expenditure of Private Households, 1973

From the HBS it is possible to estimate the aggregate expenditure on goods and services

in 1973 by various household groupings. These estimated aggregates are given in Table 5 for the State as a whole, the Dublin metropolitan area and the Planning Regions. These estimates were compiled simply by grossing up the average weekly HBS expenditures for 1973 to an annual national basis using the total number of private households as given by the 1971 Census. To arrive at estimates of actual expenditure, the retail value of own farm/garden produce (i.e., non-cash consumption) was eliminated and the HBS figure for alcoholic drink was adjusted to allow for the estimated 60 percent understatement of expenditure on the assumption that it was uniform in all sub-classifications.

The national aggregates tempt one to make a comparison with Personal Expenditure estimated annually by the CSO for the compilation of National Income and Expenditure Accounts. Even though such comparisons were made at item level within the CSO as part of process of validating the HBS results (this was how the 60 percent understatement of expenditure on alcoholic drink was quantified) the State aggregates of household expenditure given in Table 5 cannot be compared directly with the published 1973 Personal Expenditure figures because the two concepts differ radically in scope, coverage, concepts and nomenclature.

The *scope* of Personal Expenditure in the National Accounts covers the private consumption expenditure of all persons resident in "private" households and institutions (e.g., hotels, hostels, barracks, convents, etc.), together with the "collective" consumption (including wages/salaries paid to employees) of private non-profit institutions (e.g., schools, social clubs, private hospitals etc.). The *coverage* of Personal Expenditure in the National Accounts is restricted to consumption expenditure whereas household expenditure in the HBS includes some non-consumption items (i.e., in National Account parlance) such as mortgage repayments, insurance premiums, charitable and church donations, subscriptions to clubs and societies, etc. There are *conceptual* differences as well - for example, the inclusion of the rental equivalent of owner occupied dwellings in National Accounts (actual housing expenses are covered in HBS) and the valuation of own consumption at producer prices (at retail prices in HBS). Differences in the classification of goods and services also exist at the moment. For example, the heading "food" in Personal Expenditure covers all food purchases including those by households in restaurants and hotels; the latter would be incorporated implicitly under the heading "hotel charges" in the HBS.

These differences between HBS expenditure estimates and the Personal Expenditure figures compiled in the National Accounts have been considered at some length simply because they have not been highlighted previously in any published reports or commentaries.

Changes in Household Expenditure Patterns

Changes in expenditure patterns can be examined retrospectively for urban households only since the earlier surveys conducted in 1965-66 and 1951-52 were restricted to urban areas. The average weekly expenditures of urban households in these two periods are compared with those in 1973 in Table 6 in both absolute and percentage form. The same classification of goods and services was basically used in the 1965-66 and 1973 surveys, but certain adjustments had to be made to the 1951-52 results to make them comparable.

There has been a substantial and continued change in the pattern of household expenditure over the period. The proportion of expenditure spent on food, fuel and light

Table 5: *Aggregate Expenditure* (£ millions) of private households in 1973 classified by regional location (derived from 1973 HBS).*

Item Description	State	Dublin and Dun Laoire	Planning Regions							
			East	South East	South West	Mid- West	West	Donegal & North West	Mid- lands	North East
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Food	461	107	178	49	74	41	36	25	33	25
Alcoholic drink	175	49	76	18	28	14	12	7	11	9
Tobacco	70	16	27	7	10	6	6	4	5	4
Clothing and footwear	167	36	60	16	26	16	15	9	15	10
Fuel and light	74	17	28	8	12	7	6	4	5	5
Housing	111	41	60	9	16	7	6	4	4	6
Household non-durables	26	6	10	3	4	2	2	1	2	1
Household durables	74	19	32	7	11	6	5	4	5	4
Miscellaneous goods	48	14	23	4	8	3	3	2	3	3
Transport	184	45	77	19	27	16	14	10	12	10
Services and Other Expenses	227	69	109	23	35	15	14	10	12	11
Total	1,618	419	681	163	252	133	119	79	106	88
Number of private households (000) - 1971 Census of Population	No. 726	No. 155	No. 255	No. 79	No. 114	No. 66	No. 62	No. 48	No. 58	No. 44

*HBS expenditure on alcoholic drink adjusted for understatement and retail value of home consumption of own farm and garden produce excluded.

Table 6: *Expenditure patterns of urban households in 1951-52, 1965-66 and 1973.*

Commodity group	1951-52		1965-66		1973	
Household size	4.15 persons		4.03 persons		4.06 persons	
Household expenditure	£	%	£	%	£	%
Food	4.07	37.7	6.70	31.6	13.15	29.2
Alcoholic drink	0.12	1.1	0.79	3.7	2.18	4.8
Tobacco	0.54	5.0	1.31	6.2	1.93	4.3
Clothing and footwear	1.41	13.0	1.93	9.1	4.27	9.5
Fuel and light	0.77	7.1	1.12	5.3	2.18	4.8
Housing	0.77	7.1	1.72	8.1	4.15	9.2
Household non-durables	0.19	1.7	0.35	1.6	0.77	1.7
Household durables	0.28	2.6	0.87	4.1	2.16	4.8
Miscellaneous goods	0.21	1.9	0.59	2.8	1.56	3.5
Transport	0.47	4.4	2.04	9.6	5.17	11.4
Services and other expenses	1.96	18.1	3.82	17.9	7.54	16.7
Total	10.79	100.0	21.22	100.0	45.04	100.0

declined significantly; this was balanced by equally significant increases for housing, household durables, miscellaneous goods and transport. In making such comparisons allowance should, of course, be made for the effect on consumption patterns of the changes which occurred in the average size and composition of urban households over the period. Little significance can be attributed to the proportion of expenditure said to be spent on alcoholic drink because of possible variations in the degree of understatement. The most striking feature of Table 6 is, of course, the very substantial rise in the *level* of household expenditure since 1951-52. Much of this increase was due to corresponding increases in prices. Using the CPI to eliminate this price effect, the underlying volume increases in urban household expenditure are shown in Table 7. Using the commodity group indexes compiled in conjunction with the CPI it is also possible to examine the volume increases between 1965-66 and 1973 for particular commodity groupings. The CPI calculated to base mid-August, 1953 can only be used for this purpose. This does not allow the extension of the analysis to the 1951-52 survey results and it also limits the commodity break-down to the seven groups distinguished in that series. The results are given in Table 8 and show some interesting variations. Food consumption increased least of all in volume terms (only 14 percent); fuel and light also showed a relatively low increase in volume (20 percent). The large volume increase occurred in the case of household durables (53 percent), whilst increases for other commodities ranged between 32 percent and 37 percent.

Table 7: *Urban household expenditure volume changes between 1951-52 and 1973.*

Periods	Urban household expenditure		
	Value increase	Price increase	Volume increase
	%	%	%
1951-52 to 1965-66	97	64	20
1965-66 to 1973	112	66	28
1951-52 to 1973	317	170	54

Table 8: *Urban household expenditure volume changes for commodity groups between 1965-66 and 1973.*

Commodity group	Urban household expenditure		
	Value increase	Price increase	Volume increase
	%	%	%
Food	96	72	14
Drink and tobacco	96	49	32
Clothing and footwear	121	61	37
Fuel and light	94	62	20
Housing	141	81	34
Household durables	148	62	53
Transport, other goods and services	121	66	33
Total	112	66	28

COMPARISON WITH NORTHERN IRELAND AND UK

Basis for Comparison

Surveys of household expenditure and income have been conducted on a continuing annual basis in the UK since 1957. The survey is titled the *Family Expenditure Survey (FES)* and the results have been used since 1962 to annually update the weighting basis of the UK Retail Price Index. The survey methodology is comparable to that used in the Irish HBS.

Between 1957 and 1967 only a small number of Northern Ireland households were included in the FES. However, since 1967 a separate inquiry has been conducted in the North based on an annual sample of approximately 900 households and separate results have been published. A random sub-sample of about 250 of these Northern Ireland households is included in the overall sample of approximately 7,000 from which results are compiled in respect of the UK as a whole. Both the UK and Northern Ireland FES reports are available in respect of 1973⁶ and this allows direct comparison with the 1973 HBS results.

Household Membership

In comparing the results of these Irish, Northern Ireland and UK surveys account must be taken of differences in household size and composition because of the close relationship which exists between these characteristics and the level and pattern of household expenditure and income. The relevant particulars are given in Table 9 in respect of the households covered by each survey in 1973. Average household size in Ireland (4.009 persons) was significantly higher than that of Northern Ireland (3.320 persons) and of the UK as a whole (2.824 persons). Household composition was divided equally between males and females in all three regions. However, the average number of household members aged 65 years and over was 0.383 persons in this country; this was higher than the corresponding number in Northern Ireland (0.348 persons) and the UK (0.362 persons).

Expenditure Patterns

Table 10 shows the Irish, Northern Ireland and UK household expenditure patterns in

Table 9: *Size and composition of the average household in Ireland, Northern Ireland and UK, 1973.*

Persons	Average number of persons per household					
	Ireland		Northern Ireland		UK	
	No	%	No.	%	No.	%
Sex						
Male	2.002	49.9	1.607	48.4	1.379	48.8
Female	2.006	50.1	1.713	51.6	1.445	51.2
Age						
Over 65 years	0.383	9.6	0.348	10.5	0.362	12.8
Under 65 years	3.626	90.4	2.972	89.5	2.462	87.2
Total persons	4.009	100.0	3.320	100.0	2.824	100.0

Source HBS for Ireland, FES for UK

Table 10 *Average weekly household expenditure in Ireland, Northern Ireland and UK, 1973.*

Commodity group	Average weekly household expenditure					
	Ireland		Northern Ireland		UK	
	£	%	£	%	£	%
Food	13.16	32.1	10.26	26.8	9.63	22.5
Alcoholic drink	1.87	4.6	1.44	3.8	1.85	4.3
Tobacco	1.86	4.5	1.68	4.4	1.47	3.4
Clothing and footwear	4.41	10.9	4.10	10.7	3.48	8.1
Fuel and light	1.97	4.8	2.49	6.5	2.17	5.1
Housing	2.94	7.2	3.22	8.4	6.51	15.2
Household non-durables	0.69	1.7	0.69	1.8	0.70	1.6
Household durables	1.97	4.8	2.52	6.6	3.09	7.2
Miscellaneous goods	1.28	3.1	1.05	2.7	1.52	3.6
Transport	4.88	11.9	6.08	15.9	5.37	12.5
Services and other expenses	6.01	14.6	4.81	12.5	7.07	16.5
Total	41.03	100.0	38.34	100.0	42.86	100.0

1973 in both absolute and percentage form for the ten commodity groups distinguished in the HBS. The classification of consumer goods and services in the FES differs somewhat from that used in the HBS and the FES figures have been adjusted to ensure comparability.

There are some striking differences between the three percentage expenditure patterns. For example, the percentage of expenditure spent on food by Irish households (32.1 per cent) was substantially higher than that spent by Northern Ireland (26.8 per cent) and UK (22.5 per cent) households. There was an opposite pattern for housing, household durables, services and other expenses where the percentage expenditure spent was in all cases highest for the UK and lowest for this country. The percentage expenditure spent on housing in the UK (15.1 per cent) was particularly high. Table 10 shows that the absolute level of total household expenditure in 1973 was of the same order in Ireland and the UK (£41.03 *vis-a-vis* £42.86) with Northern Ireland being a little lower (£38.34). This may be

Table 11: *Average weekly household expenditure per person in Ireland, Northern Ireland and UK, 1973.*

Commodity group	Average weekly household expenditure per person		
	Ireland	Northern Ireland	UK
	£	£	£
Food	3.28	3.09	3.41
Alcoholic drink	0.47	0.43	0.66
Tobacco	0.46	0.51	0.52
Clothing and footwear	1.10	1.23	1.23
Fuel and light	0.49	0.75	0.77
Housing	0.73	0.97	2.31
Household non-durables	0.17	0.21	0.25
Household durables	0.49	0.76	1.09
Miscellaneous goods	0.32	0.32	0.54
Transport	1.22	1.83	1.90
Services and other expenses	1.50	1.45	2.50
Total	10.23	11.55	15.18

Table 12: *Percentage tenure distribution of private households in Ireland, Northern Ireland and UK, 1973.*

Household tenure	Percentage distributions		
	Ireland	Northern Ireland	UK
	%	%	%
Owned outright	47.7	26.1	20.7
Owned with mortgage	23.4	13.7	28.0
Rented - Local Authority	16.0	36.9	31.5
Rented - private owner	10.8	21.1	17.2
Rent free	2.1	2.2	2.6
Total	100.0	100.0	100.0

a little surprising at first sight until account is taken of the corresponding differences in average household size. The expenditure patterns are, in fact, given on a *per capita* basis in Table 11. This table shows that the *per capita* total expenditure in the UK (£15.18) was substantially higher than that of Northern Ireland (£11.55) and this country (£10.23). This was mainly due to higher *per capita* expenditure on housing, household durables, miscellaneous goods, transport and services in the UK. The very high expenditure on housing is also the most notable feature of this *per capita* comparison. These disparities in housing cost are no doubt partly explained by corresponding differences in household tenure summarised in Table 12. It must be emphasised that no significance can be attached to the figures for alcoholic drink as the expenditure incurred was understated in all three surveys.

Other Features

The three 1973 surveys also permit the comparison of a number of other interesting features. For example, Table 13 shows the income distribution of private households in the three regions for the maximum detail common set of sub-classifications of Gross Weekly Household Income distinguished in each of the three reports. The comparison of these income distributions is, however, subject to a number of qualifications. In the first place, the definitions of Gross Weekly Household Income used in the HBS and FES are not identical; it is based on the concept of *actual* income on the occasion of the interview in the HBS and *normal* income in the FES. Furthermore, the distributions reflect the income of respondents which may have differed in the three surveys.

The incidence of certain household facilities and durable goods is also surveyed in these surveys. The relevant percentages for a common list of items are given in Table 14;

Table 13: *Estimated percentage income distributions of private households in Ireland, Northern Ireland and U.K., 1973.*

Gross weekly household income	Percentage distributions of households		
	Ireland	Northern Ireland	UK
	%	%	%
Under £10	11.1	8.1	4.2
£10 and under £15	8.3	7.6	8.7
£15 £20	6.4	6.5	6.5
£20 £25	7.7	6.7	5.3
£25 £30	10.0	7.2	5.5
£30 £40	16.2	21.1	13.1
£40 £50	12.7	13.3	14.4
£50 £60	8.8	9.8	13.2
£60 £70	5.6	8.9	9.4
£70 £80	4.4	2.6	6.7
£80 and over	8.8	8.1	13.0
Total	100.0	100.0	100.0

Table 14. *Percentage incidence of certain facilities and durable goods in private households in Ireland, Northern Ireland and UK, 1973.*

Household facilities and durable goods	Percentage incidence in private households		
	Ireland	Northern Ireland	UK
	%	%	%
Telephone	20.6	28.3	43.4
Television set	79.4	85.9	93.4
Washing machine	44.5	48.7	66.6
Refrigerator	53.9	55.6	77.6
Central heating (full or partial)	14.1	21.3	38.5
One car only	48.0	50.2	45.1
Two or more cars	2.1	6.1	8.8

Table 15. Percentage distribution of persons living alone in 1973 classified by age and sex.

Years of age	Sex		Total %
	Males	Females	
	%	%	
Under 20	0.1	0.9	1.0
21 to 44	6.7	5.3	12.0
45 .. 64	18.4	20.3	38.7
65 and over	16.2	32.1	48.3
Total	41.4	58.6	100.0

Source 1973 HBS

they highlight some striking variations. With exception of cars, the percentage of households with each of the items listed was substantially higher in the UK than in this country. Their incidence was also higher in Northern Ireland, but the differences were not as pronounced. The greatest Irish/UK disparities occurred in the case of telephones (20.6 percent *vis-à-vis* 43.4 percent) and central heating (14.1 percent *vis-à-vis* 38.5 percent). The incidence of motor cars exhibited a different trend with 50.1 percent, 56.3 percent and 53.9 percent of the households in Ireland, Northern Ireland and UK, respectively, having one or more car. As would be expected, multi-car households were more plentiful in the UK and Northern Ireland than in this country.

1973 HBS RESULTS FOR SPECIAL TYPES OF HOUSEHOLDS

Households with Particular Compositions

The 1973 results were analysed by household size in the initial report, but households comprised of various combinations of adults and children* were not separately distinguished. Household composition classifications are an important facet of the analysis of HBS results and they will be incorporated in subsequent detailed reports. To facilitate users in the meantime a summary State classification of the 1973 results by household composition is given in Table 16.

Variations in the absolute levels of total household expenditure can be seen to be directly related to household size and composition. However, the percentage expenditure distribution shows some interesting variations.

For example, in the case of two adult households there was a significant increase in the food percentage as the number of constituent children rose from 1 to 4+. The percentage expenditure on fuel and light and on housing was highest in single and two person households. Perhaps the most intriguing feature of Table 16 is the almost consistent percentage, (i.e., 1.6 percent to 1.8 percent) of expenditure which households spent on non-durables within each composition category.

One person households represented about 14 percent of the total number of private households in the country. They are of particular interest especially in the context of examining the circumstances of the elderly living alone. Table 15 gives the percentage dis-

*A *child* is defined as a household member under fourteen years

Table 16: Average household size and percentage household expenditure in the State, 1973 classified by household composition.

Item description	Household Composition												State
	1 adult	2 adults	2 adults and 1 child	2 adults and 2 children	2 adults and 3 children	2 adults and 4+ children	3 adults	3 adults and children	4 adults	4 adults and children	Others with children	Others without children	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
No of households in sample	1,013	1,471	378	513	408	627	745	648	440	536	680	289	7,748
Adjusted number of households in sample after reweighting	1,085	1,539	375	511	390	584	782	625	460	497	620	280	7,748
Average household size	1.00	2.00	3.00	4.00	5.00	6.95	3.00	5.84	4.00	6.58	8.13	5.61	4.01
Household expenditure	%	%	%	%	%	%	%	%	%	%	%	%	%
Food	34.7	32.3	27.3	27.6	30.3	34.1	32.2	34.1	30.5	34.6	33.4	30.0	32.1
Alcoholic drink	4.5	5.4	4.3	3.9	3.8	3.4	5.2	3.9	5.3	4.3	4.7	5.3	4.6
Tobacco	4.2	5.1	3.7	3.1	3.4	3.5	5.8	4.1	5.0	4.6	5.0	5.0	4.5
Clothing and footwear	7.1	8.7	8.8	9.4	7.7	8.6	10.4	10.0	12.9	12.6	14.0	15.3	10.7
Fuel and light	8.9	6.2	4.7	4.7	5.0	5.1	5.1	4.6	3.9	4.3	3.5	3.2	4.8
Housing	11.8	7.7	9.2	11.1	10.2	8.5	5.2	7.1	5.3	5.2	4.5	6.1	7.2
Household non-durables	1.6	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.8	1.8	1.8	1.7	1.7
Household durables	2.7	3.7	6.7	6.3	6.3	5.4	5.3	4.5	4.9	4.3	4.4	4.4	4.8
Miscellaneous goods	2.2	2.9	2.7	3.3	3.3	2.9	2.8	3.2	3.3	3.0	3.6	3.6	3.1
Transport	8.0	11.5	16.2	12.3	12.7	12.4	12.2	11.8	12.3	12.0	10.6	12.0	11.9
Services and other expenses	14.1	15.0	14.7	16.6	15.5	14.5	14.2	15.2	15.0	13.2	14.4	13.3	14.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	£	£	£	£	£	£	£	£	£	£	£	£	£
Total average weekly expenditure	12.67	27.42	40.16	46.47	45.13	46.58	38.83	48.49	55.00	55.39	71.49	73.43	41.03

tribution of persons living alone, classified by both sex and age. As can be seen, over 48 percent of those living alone were aged 65 years and over, two-thirds of these were women. The expenditure patterns of men and women aged 65 years and over living alone are summarised in Appendix 2.

A selection of interesting household characteristics are analysed by household composition in Table 17. The percentage household distribution is incorporated to show the relative importance of the different composition categories distinguished. The average age of the head of the household (HOH) is also shown and this can be taken as a rough indication of the "maturity" of households. The incidence of washing machines, refrigerators, full central heating and cars showed similar trends, being high in households containing children and particularly low in single and two person households. The tenure distribution of households is also summarised for each composition category; this has a significant influence on the level of housing costs. The single and two person households mainly lived either in owned-outright or rented accommodation, whilst the incidence of mortgaged and Local Authority rented dwellings was highest for households with children.

Typical Family Units

The expenditure patterns of households comprised of married couples with children are summarised in Table 18 for urban areas, rural areas and the State as a whole. Four types of family units are distinguished, namely,

- (1) Married couple and one child;
- (2) two children;
- (3) three children;
- (4) four or more children;

The number of co-operating households in the original sample and the adjusted number after reweighting are shown for each of these four household categories in Table 18. The expenditure patterns of all households in the State is incorporated for comparison purposes.

The percentage expenditure spent on food was very low (i.e., 26 percent in urban and 28 percent in rural areas) for married couples with only one child, but it increased substantially as the number of children in the family rose. However, for the other commodity groups the percentage expenditure spent by the four different types of families was surprisingly stable for the State as a whole. There were, of course, some significant differences between urban and rural areas, but these simply reflect the general disparities between urban and rural expenditure patterns revealed by the HBS. The significantly higher percentage expenditure spent on food by rural families and the substantially lower percentage on housing are particularly noticeable. By comparison with urban households rural expenditure figures for food include a relatively large proportion of home consumption of own farm or garden produce. The respective amounts are given in Table 18. The relatively low housing costs in rural areas are, of course, largely explained by the large proportion of families who owned their dwellings (see Table 19).

Table 19 confirms conclusions already drawn from Table 17, namely, that the incidence of washing machines and refrigerators increased as the number of children in a family rose. Their incidence was higher in urban areas; this urban/rural disparity was particularly pronounced in the case of full central heating. The higher incidence of cars in

Table 17: Selected household characteristics, 1973 classified by household composition.

Household Composition	Household distribution %	Incidence				% Tenure Distribution					Average age of HOH Years
		Washing machine %	Refrig- erator %	Full central heating %	Car(s) %	Owned outright %	Owned with mortgage* %	Rented Local Authority %	Rented other %	Rent free %	
1 adult	14.0	8.0	22.9	2.5	14.0	55.2	9.0	12.8	17.8	5.1	61
2 adults	19.9	22.9	42.9	7.1	37.9	57.8	16.2	10.5	13.5	1.9	60
2 adults and 1 child	4.8	45.5	68.3	21.5	61.0	34.3	28.3	11.2	23.4	2.8	38
2 adults and 2 children	6.6	63.3	78.7	27.9	74.1	26.3	42.3	15.4	14.2	1.8	36
2 3 ..	5.0	78.0	78.5	29.1	74.1	26.6	44.0	20.0	7.6	1.8	37
2 4+ children	7.5	79.9	71.4	20.8	67.8	31.1	31.6	29.0	7.0	1.3	39
3 adults	10.1	32.4	49.6	5.7	48.5	59.5	18.8	10.6	9.4	1.6	61
3 .. with children	8.1	62.8	65.3	13.3	65.7	46.6	28.6	20.3	3.2	1.3	48
4 adults	5.9	48.4	61.6	5.0	53.5	54.4	21.5	13.5	9.3	1.3	58
4 .. with children	6.4	65.2	60.4	10.4	63.0	45.0	26.5	21.5	5.1	1.9	51
Other with children	8.0	65.6	58.3	8.5	55.1	43.0	26.1	25.8	4.3	0.8	52
Other without children	3.6	51.4	52.0	4.1	59.9	56.6	24.9	11.7	6.7	-	58
State	100.0	44.5	53.9	11.1	50.2	47.7	23.4	16.0	10.8	2.1	52

*Including dwellings owned under tenant purchase agreements

Table 18: Average household size and percentage household expenditure in urban/rural areas and State, 1973 classified by family type.

Item description	Couple and 1 child			Couple and 2 children			Couple and 3 children			Couple and 4+ children			All Households in State
	Urban areas	Rural areas	State	Urban areas	Rural areas	State	Urban areas	Rural areas	State	Urban areas	Rural areas	State	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Number of households in sample	249	111	360	371	127	498	288	115	403	409	208	617	7,748
Adjusted number of households in sample after reweighting	247	109	356	369	126	494	282	103	385	384	190	574	7,748
Average age of HOH (years)	36	40	37	35	38	36	36	40	37	37	41	39	52
Household expenditure	%	%	%	%	%	%	%	%	%	%	%	%	%
Food	26.2	28.3	26.8	25.8	33.6	27.4	28.6	35.8	30.3	32.1	38.1	34.0	32.1
Alcoholic drink	4.8	3.4	4.4	4.1	3.4	4.0	4.1	3.2	3.8	3.5	3.0	3.4	4.6
Tobacco	3.6	3.9	3.7	3.0	3.7	3.1	3.4	3.5	3.4	3.6	3.4	3.5	4.5
Clothing and footwear	7.8	11.2	8.8	9.1	9.9	9.3	7.6	8.3	7.8	7.9	10.3	8.6	10.7
Fuel and light	4.6	4.7	4.7	4.6	5.4	4.8	5.0	5.1	5.0	5.2	4.7	5.0	4.8
Housing	11.5	4.0	9.3	12.9	4.8	11.2	11.4	6.5	10.2	9.6	6.3	8.5	7.2
Household non-durables	1.8	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.6	1.6	1.7
Household durables	6.2	8.4	6.8	5.9	7.1	6.1	6.4	5.7	6.3	5.5	5.3	5.5	4.8
Miscellaneous goods	2.8	2.3	2.7	3.1	4.7	3.4	3.5	2.7	3.3	3.2	2.2	2.9	3.1
Transport	15.3	19.1	16.4	12.1	14.1	12.5	11.9	15.0	12.7	12.2	13.1	12.5	11.9
Services and other expenses	15.4	13.1	14.7	18.0	11.6	16.7	16.4	12.8	15.5	15.6	12.1	14.5	14.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	£	£	£	£	£	£	£	£	£	£	£	£	£
Total average weekly household expenditure*	42.19	38.83	41.16	50.02	37.32	46.79	46.79	41.12	45.28	48.08	44.52	46.90	41.03
*Includes consumption of own farm or garden produce	0.02	1.04	0.33	0.05	1.60	0.45	0.03	1.84	0.52	0.06	3.27	1.13	0.96

Table 19: Selected household characteristics, 1973 classified by family type.

Family Types	% Household distribution	% Incidence				% Tenure Distribution				
		Washing machine	Refrigerator	Full central heating	Car(s)	Owned outright	Owned with mortgage*	Rented - Local Authority	Rented other	Rent free
	%	%	%	%	%	%	%	%	%	%
Couple and 1 child:										
Urban Areas	3.2	49.0	70.9	25.1	57.6	20.8	34.2	11.8	32.7	0.5
Rural ..	1.4	42.2	67.1	17.1	75.9	62.3	16.0	7.8	6.6	7.3
State	4.6	46.9	69.7	22.7	63.2	33.5	28.6	10.6	24.7	2.6
Couple and 2 children:										
Urban areas	4.8	66.3	83.1	32.9	72.2	13.7	51.2	18.9	15.5	0.6
Rural ..	1.6	57.0	69.1	16.0	83.1	58.5	20.5	4.0	11.5	5.5
State	6.4	63.9	79.6	28.6	75.0	25.1	43.4	15.1	14.5	1.9
Couple and 3 children.										
Urban areas	3.6	79.9	83.5	33.3	71.3	12.5	53.4	24.1	8.9	1.1
Rural ..	1.3	74.4	67.6	18.0	84.2	65.5	19.2	7.2	4.2	3.9
State	5.0	78.4	79.2	29.2	74.8	26.7	44.2	19.6	7.7	1.9
Couple and 4+ children.										
Urban areas	5.0	84.8	75.3	24.0	66.8	13.9	40.0	38.9	6.0	1.2
Rural ..	2.4	71.4	63.8	15.6	72.6	66.2	14.5	8.3	9.3	1.8
State	7.4	80.4	71.5	21.2	68.8	31.2	31.6	28.8	7.1	1.4
All households:										
Urban areas	56.6	51.7	64.1	15.2	48.2	26.5	31.7	23.9	16.5	1.5
Rural ..	43.4	35.1	40.6	5.8	52.7	75.3	12.7	5.7	3.5	2.9
State	100.0	44.5	53.9	11.1	50.2	47.7	23.4	16.0	10.8	2.1

*Including dwellings owned under tenant purchase agreements

rural areas is also very noticeable when classified in this fashion by family type. The tenure breakdowns given in Table 19 show that the incidence of owner occupied accommodation for these four family units was below the national average in both urban and rural areas; this was balanced somewhat by a higher than average incidence of mortgaged dwellings. The tenure pattern for rented accommodation is interesting. Privately rented dwellings predominated for families with one child, but the incidence of Local Authorities rented accommodation was substantially higher for the families with three or more children. Rural tenure patterns were, of course, dominated by the high incidence of owner occupied dwellings.

Households in Receipt of Social Welfare Payments

Being low income households the expenditure patterns of households in which income accrued *mainly* from social welfare payments would be expected to differ significantly from those of other households. To investigate this point two types of such households are distinguished in Table 20, namely, those in which 75 percent and more of Gross Weekly Household Income was derived from:

- (a) retirement, old age, widows and orphans social welfare pensions (these will be referred to as "pensioner" households);
- (b) unemployment benefits and assistance, occupational injuries and disability benefits and redundancy payments (these will be referred to as "state assisted" households).

It was considered that a cut-off point of 75 percent would be high enough to distinguish two relatively homogenous groupings of households, and sufficiently low to ensure that the corresponding sub-sample sizes would be adequate for estimation purposes.

Urban and rural households are separately distinguished for comparison purposes. The number of co-operating households in the original sample and the adjusted number after reweighting are also shown; these indicate the relative importance of the different categories of households distinguished.

As expected the absolute level of total household expenditure was very low in "pensioner" households; this was due not only to their low income but also to their small size (1.52 persons on average). The total expenditure of "state assisted" households, although almost double that of "pensioner" households, was still substantially less than that of other households. The expenditure patterns of both "pensioner" and "state assisted" households were mainly characterised by high percentage expenditures on food, fuel and light; and by lower than average percentage outlay on household durables, miscellaneous goods and transport. The high proportion of expenditure spent on tobacco by "state assisted" households is particularly noticeable. The urban/rural breakdown reveals little of interest except the normal differences.

Table 21 provides the usual analysis of certain selected household characteristics. As expected the incidence of the listed facilities were lower than average in "state assisted" households and very low in "pensioner" households. The households tenure analysis shows some interesting variations. Many "pensioner" households owned their dwellings; this was also true of "state assisted" households in rural areas. However, "state assisted" households in urban areas mainly resided in Local Authority rented dwellings. The detailed results shows that the bulk of "pensioner" and "state assisted" households classified as

Table 20. Average household size and expenditure patterns of households in urban areas, rural areas and State, 1973 where 75% of gross household income was comprised of social welfare pensions and of State unemployment payments.

Item Description	75% of gross hld income from social welfare pensions			75% of gross hld income from state unemployment payments			Other households			All households		
	Urban areas	Rural areas	State	Urban areas	Rural areas	State	Urban areas	Rural areas	State	Urban areas	Rural areas	State
Number of households in sample	No. 273	No. 250	No. 523	No. 104	No. 85	No. 189	No. 4,074	No. 2,962	No. 7,036	No. 4,451	No. 3,297	No. 7,748
Adjusted number of households in sample after reweighting	303	235	538	100	76	176	3,982	3,052	7,034	4,385	3,363	7,748
Household size												
Males	0.40	0.70	0.53	2.48	2.10	2.32	2.05	2.18	2.11	1.94	2.08	2.00
Females	1.04	0.92	0.99	2.38	1.47	1.99	2.20	1.94	2.08	2.12	1.86	2.01
Total	1.44	1.62	1.52	4.87	3.57	4.30	4.24	4.12	4.19	4.06	3.94	4.01
Average age of head of household (years)	71.3	72.3	71.7	43.4	50.2	46.4	48.1	54.8	51.0	49.6	55.9	52.3
Household expenditure	%	%	%	%	%	%	%	%	%	%	%	%
Food	44.5	45.3	44.9	40.0	44.1	41.5	28.8	36.5	31.7	29.2	36.8	32.1
Alcoholic drink	3.0	3.6	3.2	3.9	5.3	4.4	4.9	4.1	4.6	4.8	4.1	4.6
Tobacco	5.0	6.3	5.6	8.3	8.4	8.4	4.2	4.8	4.5	4.3	4.9	4.5
Clothing and footwear	5.7	10.8	8.0	9.2	9.1	9.1	9.5	12.9	10.8	9.5	12.9	10.7
Fuel and light	10.9	11.7	11.2	8.4	6.9	7.8	4.7	4.5	4.6	4.8	4.7	4.8
Housing	12.3	3.4	8.2	7.2	5.0	6.4	9.2	3.8	7.2	9.2	3.8	7.2
Household non-durables	2.0	2.0	2.0	2.1	2.6	2.3	1.7	1.7	1.7	1.7	1.7	1.7
Household durables	2.6	2.6	2.6	3.9	3.8	3.9	4.8	4.9	4.8	4.8	4.8	4.8
Miscellaneous goods	2.1	2.0	2.1	3.6	2.3	3.1	3.5	2.6	3.1	3.5	2.5	3.1
Transport	1.2	3.1	2.1	5.0	7.4	5.9	11.7	12.8	12.2	11.5	12.6	11.9
Services and other expenses	10.7	9.3	10.1	8.3	5.2	7.2	16.9	11.3	14.8	16.7	11.2	14.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average weekly household expenditure	£ 10.71	£ 11.84	£ 11.21	£ 25.43	£ 19.47	£ 22.85	£ 48.14	£ 38.06	£ 43.77	£ 45.04	£ 35.81	£ 41.03

Table 21: Selected characteristics of households in urban areas, rural areas and State 1973 where 75% of gross weekly household income was comprised of social welfare pensions and of state unemployment payments.

Income composition	% Household distribution	% Incidence				% Tenure distribution				
		Washing machine	Refrigerator	Full central heating	Car(s)	Owned outright	Owned with* mortgage	Rented- Local Authority	Rented - other	Rent free
75% of gross household income from social welfare pensions	%	%	%	%	%	%	%	%	%	%
Urban areas	3.9	12.8	28.3	0.7	1.6	33.6	11.6	31.4	18.8	4.6
Rural areas	3.0	4.9	15.5	0.6	5.4	55.6	17.6	12.3	6.3	8.3
State	6.9	9.4	22.7	0.7	3.3	43.2	14.2	23.1	13.4	6.2
75% of gross household income from State unemployment payments										
Urban areas	1.3	33.5	30.1	7.5	13.4	11.0	13.0	61.2	12.7	2.1
Rural areas	1.0	12.4	17.8	2.9	28.6	46.4	27.9	15.5	6.8	3.5
State	2.3	24.4	24.7	5.5	20.0	26.4	19.5	41.4	10.1	2.7
Other households										
Urban areas	51.4	55.1	67.7	16.5	52.6	26.3	33.6	22.4	16.4	1.2
Rural areas	39.4	38.0	43.1	6.3	56.9	77.5	11.9	4.9	3.2	2.4
State	90.8	47.7	57.0	12.1	54.5	48.5	24.2	14.8	10.7	1.8
All households										
Urban areas	56.6	51.7	64.1	15.2	48.2	26.5	31.7	23.9	16.5	1.5
Rural areas	43.4	35.1	40.6	5.8	52.7	75.3	12.7	5.7	3.5	2.9
State	100.0	44.5	53.9	11.1	50.2	47.7	23.4	16.0	10.8	2.1

*Including dwellings owned under tenant purchase agreements

owning their dwellings under mortgage were, in fact, participants in tenant purchases schemes operated by Local Authorities. The expenditure patterns of single persons and married couples living alone in receipt of social welfare retirement and old age pensions are summarised in Appendix 2 for those who may be interested in these particular types of households.

USE OF HBS RESULTS FOR CPI WEIGHTING PURPOSES

General Points

The most important use of the HBS results is to provide a basis for updating the weights used in the compilation of the CPI. New weights were introduced in calculating the index for mid-February, 1976 (to base mid-November, 1975 as 100). For this purpose the HBS expenditure pattern for all households combined was adjusted by:

- (a) allowing for price changes between 1973 and 1975;
- (b) incorporating a correction for the understatement of drink in the HBS;
- (c) excluding the retail value of own farm and garden produce consumed in the home (since the CPI is based on the concept of current money expenditure of private households)*;
- (d) excluding the capital repayment element of house purchase mortgage payments*;
- (e) excluding such items as church/charity contributions, personal cash allowances and lottery/betting payments which either have no "price" or cannot be priced*.

The updated weighting basis relates to *rural* as well as *urban* households and includes mortgage interest payments for the first time.

Comparison of "Old" and "New" CPI Weights

It is of interest to compare the expenditure weights used in the compilation of the former CPI (base mid-November, 1968 as 100) with those of the updated series now being compiled to base mid-November, 1975 as 100. The percentage *urban* weights used in the compilation of the former series are directly compared with the *national* (i.e., urban and rural) weights used in the present series in Table 22.

The CPI is compiled on the principle of pricing a "market basket" of *fixed quantities* of a representative selection of goods and services in successive quarters. In practice the index is calculated by updating on a quarterly basis the cost (i.e., expenditure weight) in the base quarter of each item in the "basket" by applying the percentage changes in prices between successive quarters. Thus the percentage distribution of these expenditure weights can alter over time directly as a result of prices changing at different rates. For this reason, the percentage expenditure weights of the *former* series are shown for both mid-November, 1968 (base quarter) and mid-November, 1975 (final quarter) in the first two columns of Table 22. The weights in the second column are those which *would* have been applied to price changes between November, 1975 and February, 1976 to calculate the quarterly percentage change in the CPI if no new HBS results had been available for

*Those exclusions account for approximately 9 percent of the total stated average weekly household expenditure in the State in 1973.

Table 22: Percentage expenditure weights of former and present CPI series.

Commodity groups	Former CPI		Present CPI	Equivalent
	Nov. 1968 % weights* (urban)	Nov. 1975 % weights* (urban)	Nov 1975 % weights ** (State)	updated Nov. 1975 % weights** (urban)
Food	%	%	%	%
Meat	8.5	9.1	8.5	7.8
Fish	0.6	0.6	0.4	0.5
Potatoes	1.1	2.3	1.2	1.3
Other vegetables	1.4	1.5	1.3	1.4
Bread, flour, cakes and biscuits	4.6	4.5	4.4	3.8
Milk and cheese	3.2	2.8	2.4	2.8
Eggs	1.6	1.4	0.7	0.8
Butter and other fats	2.8	2.2	2.0	1.7
Fruit	1.2	1.4	1.1	1.2
Tea, coffee and cocoa	1.1	0.7	0.7	0.6
Sugar	0.9	1.1	0.9	0.7
All other food	5.4	6.0	6.5	6.5
Total food	32.4	33.7	30.3	29.2
Alcoholic drink	8.7	8.0	11.4	12.2
Tobacco	7.0	5.1	4.4	4.1
Clothing and footwear				
Men's clothing	2.1	2.2	2.8	2.2
Boys' clothing	0.8	0.7	0.7	0.7
Women's clothing	2.7	2.6	3.3	3.1
Girls' clothing	0.6	0.6	0.6	0.7
Other clothing	0.7	0.7	0.6	0.6
Footwear	1.9	2.0	2.7	2.1
Total clothing and footwear	8.8	8.9	10.7	9.4
Fuel and light	5.5	6.5	5.9	6.1
Housing	6.9	5.9	6.1	7.4
Durable household goods	4.0	4.0	4.8	4.8
Other goods	4.9	5.6	5.2	5.6
Transport	10.2	10.7	13.2	12.5
Services and related expenditure	11.6	11.6	8.0	8.8
Total all items	100.0	100.0	100.0	100.0

* Based on 1965-66 household consumption patterns

** Based on 1973 household consumption patterns.

updating purposes. The increase in the percentage weights for food, fuel and light and other goods reflect the fact that the prices of these items had increased at a higher rate than average during the seven year period 1968-75 as shown directly by the corresponding CPI commodity group index numbers which increased by 129.1, 161.1 and 150.9 percent, respectively, compared with an increase of 119.9 percent for all items combined.

The third column in Table 22 shows the *updated national* weights actually used in the calculation of the CPI change between November, 1975 and February, 1976. In addition Table 22 shows in the final column what the equivalent updated *urban* weights would be for direct comparison with the former series. Any comparison between the "old" and "new" weights must allow for the fact that mortgage interest payments have been included for the first time in the present index series. However, the expenditure weight relating to this item constitutes only 1.14 percent of the current national weighting pattern (and 1.65 percent of the equivalent urban weights shown in Table 22) and, accordingly, accounts only to a small degree for any differences between these "old" and "new" weights. The differences between the two sets of urban weights reflect consumption changes between 1965-66 and 1973 which are described and analysed in some detail in the recent HBS report. The changes mainly reflect the normal shifts in consumer expenditure patterns associated with rising income and standards of living. The extension of the CPI weighting basis to include rural areas is mainly characterised by increased weights for food, tobacco, clothing and transport balanced by corresponding decreases in the weights for alcoholic drink, fuel and light, housing and services.

Differences in weighting patterns may be of interest but what most people are concerned about is the effect which the updating of weights has on the CPI results. This can only be roughly approximated from published data, e.g., by combining the commodity group indices together using the available group weights. The correct results can only be obtained by working at item level. The results of such calculations are given in Table 23 which presents commodity group and all item index numbers for mid-February, 1976 (to

Table 23. *The official CPI for mid-February, 1976 compared with equivalent index numbers based on both former and updated urban weighting patterns (base mid-November, 1975 as 100).*

Commodity groups	Official CPI (updated national weights*)	Equivalent indexes	
		Updated urban weights*	Former urban weights
Food	106.0	106.3	107.2
Alcoholic drink	114.8	114.8	113.9
Tobacco	108.2	108.2	107.9
Clothing and footwear	102.9	102.7	103.0
Fuel and light	105.8	106.2	103.0
Housing	102.2	102.2	101.5
Durable household goods	103.5	103.5	103.5
Other goods	106.5	106.4	108.6
Transport	111.1	110.3	108.7
Services and related expenditure	108.7	108.6	108.0
All items	107.3	107.4	107.0

*Includes mortgage interest payments.

base mid-November, 1975 as 100) using both the former and equivalent updated urban weighting patterns. These two sets of index numbers can be compared directly with the official CPI series which are also provided. For all items combined the differences between the three different index numbers is negligible - the official index of 107.3 being just 0.1 percent index points *lower* than the equivalent index based on updated urban weights and 0.3 percent index points *higher* than what the former CPI would have given if it had been continued. Except for *fuel and light* and *transport* the differences between the constituent commodity group index numbers based on updated national and urban weighting patterns are also quite negligible and thereby show that the extension from urban to national weights has had an insignificant effect on the CPI. However, there are some sizeable differences between the commodity group index numbers based on the former urban weights compared with either of the two indexes based on updated weights. This is to be expected because of the changes in household expenditure patterns.

Exclusion of High Income and Pensioner Households from CPI Weighting Pattern

It could be argued that extremely wealthy and extremely poor households should not be taken into account in determining the weighting basis of the CPI since their patterns of expenditure differ significantly from those of other households. A truncation of this sort is, in fact, done in the UK where the weighting basis of the Retail Price Index excludes

(a) *High Income* Households (3-4 percent of total) where the heads of households have a gross weekly income of £110 or more in first half of 1975,

and

(b) *Pensioner* Households (approximately 11 percent of total) where at least 75 percent of the gross income of the household is derived from national insurance retirement or similar pensions.

It was considered⁷ that at the higher income ranges the pattern of expenditure is likely to be determined more by the income of the head rather than by its total income. This is reasonable since those households which have high income because they contain a number of working members are likely to have "normal" expenditure patterns. At the bottom end of the scale the UK considered that the "pensioner" households as defined above should be excluded since they comprise a fairly homogeneous group with a distinctly different expenditure pattern from other households.

The results obtained when the Irish HBS data were analysed in this fashion are set out in Table 24. For the purposes of the exercise the line of demarcation at the top end of the scale was set at a figure of £90 per week for the stated gross weekly income of the head of the household. As can be seen these "pensioner" and "high income" households constitute only 6.9 and 5.5 percent, respectively, of the total number of households in the country. Although their expenditure patterns are substantially different from those of the average household in the State it is quite apparent that the exclusion of these households would have little or no effect on the CPI weighting pattern. The percentage expenditure shown in Table 24 have *not* been adjusted for CPI weighting purposes.

Table 24 1973 HBS results for "pensioner", "high income" and other households.

Item description	"Pensioner" households	"High income" households*	All other households	State
No. of households in sample	No 523	No. 405	No. 6,820	No. 7,748
Adjusted number of households in sample after reweighting	538	429	6,781	7,748
Household size				
Males	0.53	2.64	2.08	2.00
Females	0.99	2.46	2.06	2.01
Total	1.52	5.10	4.14	4.01
% Household expenditure**	%	%	%	%
Food	44.87	25.73	32.52	32.07
Alcoholic drink	3.25	3.42	4.70	4.56
Tobacco	5.60	2.27	4.76	4.53
Clothing and footwear	8.05	8.76	11.03	10.75
Fuel and light	11.24	3.94	4.75	4.80
Housing	8.20	7.53	7.11	7.17
Household non-durables	2.00	1.33	1.73	1.68
Household durables	2.60	7.59	4.52	4.80
Miscellaneous goods	2.07	4.05	3.03	3.12
Transport	2.05	14.09	11.85	11.89
Services and other expenses	10.08	21.28	14.00	14.65
Total	100.00	100.00	100.00	100.00
Total weekly household expenditure	£ 11.21	£ 73.26	£ 41.36	£ 41.03
% Tenure breakdown	%	%	%	%
Owned outright	43.16	60.42	47.21	47.66
Tenant purchase	12.48	1.80	10.39	10.06
Owned with mortgage	1.70	32.35	13.08	13.36
Rented - Local Authority	23.07	0.46	16.42	16.00
Rented - other	13.36	4.24	11.06	10.84
Rent free	6.22	0.73	1.84	2.08
Total	100.00	100.00	100.00	100.00

* Head of household had a gross weekly income of £90+ per week in 1973.

** No adjustment for understatements of drink or CPI excluded items.

PRELIMINARY ECONOMETRIC ANALYSIS OF 1973 HBS RESULTS

Background

One of the most important uses of the HBS results is the estimation of relationships between household income and the expenditure incurred on individual goods and services. The algebraic formulation of these relationships are called Engel functions in honour of Ernst Engel who did the pioneering work in this field during the latter half of the nineteenth century. The formulation of the most appropriate relationship for a particular item of expenditure has always presented problems. For a particular algebraic formulation the item expenditure is taken as the dependent variable, with income (ideally) and other determining factors (e.g., household size) as the independent variables. Income elasticities of demand are derived from the estimated regression coefficients.

The income elasticity of an item is defined as the ratio between the proportionate change in the expenditure on the item and the corresponding proportionate change in household income. In more colloquial terms the income elasticity may be interpreted as the percentage change in the expenditure on a particular item per unit percentage increase in household income. In practice, because of the limitations of the available income data (e.g., understated), total household expenditure is often taken instead of income as the independent variables. The elasticities are then calculated in respect of total household expenditure and are termed "expenditure elasticities".

Earlier Work on Irish Data

Income-expenditure relations were originally investigated in Ireland by C.E.V. Leser⁸ using 1951-52 HBS data. The results of the 1965-66 survey were analysed in this respect by J. L. Pratschke⁹. Pratschke investigated the most appropriate algebraic formulation for the main commodity groups. He found that the *double - logarithmic function*

$$\log_e V_i = a + b \log_e V_o + c \log_e n$$

where

$$\begin{aligned} V_i &= \text{household expenditure on item } i; \\ V_o &= \text{total household expenditure;} \\ n &= \text{household size (i.e., number of persons);} \end{aligned}$$

was the most appropriate formulation for all commodity groups with the exception of "fuel and light" for which the semi-logarithmic function

$$W_i = a + b \log_e V_o + c \log_e n$$

where

$$W_i = \text{proportion of expenditure spent on item } i \text{ (i.e., } W_i = V_i / V_o \text{)}$$

gave a better fit. The double-logarithmic function postulates a constant expenditure elasticity (i.e., the regression coefficient b) at all points of the expenditure spectrum.

Analysis of 1973 Results

The purpose of the present analysis is to present at this early stage, for the convenience of users, a set of expenditure elasticities based on 1973 expenditure patterns. The double-logarithmic formulation proposed by Pratschke in respect of the 1965-66 expenditure patterns is used in all instances. It was applied to fuel and light headings for practical convenience even though Pratschke concluded that an alternative formulation gave a better fit.

The results of this analysis are subject to a number of qualifications. No effort was made to determine the most appropriate algebraic relationships for 1973 expenditure patterns. Furthermore, there may well be need to use different formulations for urban and rural households. These matters require detailed analysis before a final definitive set of elasticities can be produced.

The regression coefficients in the double-logarithmic relationship were estimated by the least squares method using a special cross-classification of 1973 results by "household size" and "average disposable weekly household income" (as used by Pratschke). Four household size groupings were distinguished, namely 1-2, 3-4, 5-6 and 7 or more persons. Disposable household income is defined as gross household income less direct taxation; four ranges were used, namely .

- (1) Under £20
- (2) £20 and under £40
- (3) £40 and under £70
- (4) £70 and over

per week. This meant that 16 sets of observations (i.e., V_i , V_o and n) were available for the estimation of the double-logarithmic regression coefficients.

The estimated 1973 expenditure elasticities for urban areas, rural areas and the State are presented in Appendix 3. The corresponding elasticities estimated by Pratschke on the basis of the 1965-66 HBS results are also presented for comparison purposes. Time does not permit a detailed analysis of these elasticity estimates. The most notable features of the figures are the general comparability of the *urban* elasticity levels in 1965-66 and 1973 (there are, of course, relatively substantial differences in particular cases) and the differences in certain instances in the 1973 elasticity levels for urban and rural households.

CURRENT APPRAISAL AND FUTURE DEVELOPMENTS

Criticisms

Many people present tonight have no doubt used HBS data for their own particular purposes and are well aware of their limitations. The most common criticisms made of HBS results generally relate to the limited sub-divisions provided for the various characteristics (e.g., gross household income, social group, religions, etc) used for classification purposes and the delay in the publication of reports. As regards the first point one must remember that the HBS is a sample survey. The survey is particularly expensive to complete and this largely determines the size of the sample. Like all sample estimates the results are subject to random errors due to the sampling process. The level of these errors increases appreci-

ably as the number of sample households on which an estimate is based decreases in size. This consideration severely limits the degree to which the results may be sub-classified. The CSO publishes results in the maximum detail which the reliability of the estimates permits. For example, ten household size and twelve gross household income ranges are distinguished in the analysis of the 1973 results. However, only four broad ranges are distinguished for each of these headings in any cross-classification of results involving another characteristics. Otherwise corresponding sub-samples would be too small to justify any further detail. Cost considerations prevent any significant expansion of the total sample. The 1973 results were based on a national sample of 7,748 co-operating households and total field costs alone (i.e., ignoring clerical and processing considerations) exceeded £130,000. This figure, with suitable adjustment for cost increases since then, should put the related questions of cost, sample size and classification of results in their true perspective. Incidentally, the results of the equivalent continuous Family Expenditure Survey in the UK are based on annual samples of approximately 7,000 households.

The second criticism customarily made of the HBS results is the delay in publication. Fieldwork on the 1973 survey terminated early in 1974 and it has taken approximately two years since then to publish the initial results. Part of this delay may be explained by the sheer size of the operation and the vast volume of data which must be clerically scrutinised, transferred on to punch cards, validated and processed by computer. Over three and a half million individual items of data had to be handled. However, the basic reason for the delays in publication to-date stemmed directly from the *ad hoc* nature of the surveys. The CSO has long been conscious of this particular defect and it was one of the basic factors which influenced the establishment of the small scale annual urban HBS which is currently being conducted. This continuing survey has allowed the CSO to establish a permanent team of clerical/field personnel and to maintain a flexible validation/processing computer system which, it is hoped, will substantially reduce the publication delay in future.

Continuous Small Scale Urban HBS

This continuous small scale urban HBS was initiated early in 1974 on the termination of fieldwork on the national 1973 survey. The survey is restricted to towns with 1,000 inhabitants and over, and it covers a random sample of approximately 1,800 - 2,000 private households each year. The main purpose of the survey is to monitor household expenditure patterns on a continuing basis and to give adequate forewarning of the need to undertake a further national survey for the purpose of updating the CPI weights. The general intention is that large scale surveys should be undertaken every five to seven years and that small scale urban surveys should be conducted during the intervening years.

EEC Harmonisation Programme

Household expenditure surveys are conducted in other EEC countries. In most instances, these are conducted on an *ad hoc* basis. At the moment only the UK, France and Ireland undertake specialist household expenditure surveys on a continuous basis. The results of national surveys are not directly comparable because of the differences in coverage, concept and nomenclatures used in individual countries. The Statistical Office of the EEC

(SOEC) and the EEC Commission are concerned that comparable data are not available for all member states. In 1963-64 a joint community household expenditure survey was conducted simultaneously in each of the six original member countries on a common basis (i.e., identical concepts, procedures and nomenclatures). Some 42,000 households participated in the survey throughout all six countries. An equivalent community survey was planned for 1973, but it was abandoned for a variety of reasons. The advent of the three new member countries has, of course, complicated matters considerably. It is now agreed that the completion of joint surveys would be impossible in the context of the enlarged community. The problem of securing comparable national figures is therefore being approached from another direction. All countries have agreed to work towards the implementation of common definitions and a standard nomenclature in their national surveys. Discussion on the formulation of these common standards has commenced and it is hoped to synchronise national surveys on this harmonised basis sometime during 1978-80. It must be emphasised that harmonisation is restricted only to questions of definitions and nomenclatures. Individual countries will continue to decide their survey methodology (i.e., selection of sample, questionnaire design, fieldwork procedures and derivation of results) on the basis of national experience and circumstances.

Timing of Next National HBS

The timing of the next large scale national HBS in this country depends on a number of considerations - the most important, of course, being the necessity of updating the CPI weights, the availability of resources and the agreed year for synchronised EEC surveys. No decision has yet been taken, but plans are being tentatively formulated for the year 1978.

There should be no basic change in the survey methodology. The EEC harmonisation programme may necessitate some conceptual changes. However, results will continue to be published in the traditional format, special provision will be made for the separate production of results in accordance with the common EEC nomenclature of goods and services which has yet to be agreed upon. The survey will extend over the whole country as 1973 but, because of the exceptional costs involved, special consideration will have to be given to the justification of again estimating the farm income of *medium-to-large* farms by means of twelve month farm accounts. Household expenditure particulars would be obtained from all households so that the relevant national data would be available for CPI weighting purposes. However, the absence of full income details in respect of farm households (or possibly only those with medium-to-large enterprises) would severely limit the usefulness of the results for other purposes. The decision made in this respect will be influenced by the actual uses made of the 1973 results and the representations made by interested parties.

- ¹ Household Budget Survey, 1973 - Volume 1 Summary Results (Stationary Office, May, 1976).
- ² Report on the Cost of Living in Ireland, June 1922.
- ³ Household Budget Survey 1951-52 (Stationary Office, 1953).
- ⁴ Household Budget Survey 1965-66 (Stationary Office, 1969).
- ⁵ Rural Household Budget - Feasibility Study by Sile Sheehy and R. O'Connor, Paper No. 61, Economic and Social Research Institute, May 1971.
- ⁶ UK Family Expenditure Survey 1973, London HMSO 1974
Northern Ireland Family Expenditure Survey 1973, Belfast HMSO 1975.
- ⁷ Report of the UK Cost of Living Advisory Committee, March 1976 (HMSO).
- ⁸ Leser, C. E. V. - Demand relationships for Ireland, ERI Paper No. 4, April 1962
- Forms of Engel Functions *Econometrica*. Vol. 31, No. 4, October 1963
- A further analysis of Irish Household Budget Data, 1951-52 ERI Paper No. 23, August 1964.
- ⁹ Pratschke, J. L. - Income - Expenditure Relations in Ireland. 1965-66. ESRI Paper No. 50, November 1969.

APPENDIX 1: *Estimated percentage distributions of private households in State, 1973.*

Household characteristics	Households	Household characteristics	Households
Gross weekly household income	%	Social group of head of household	%
Under £4	1.1	Higher professional)	HBS code 2.5
£ 4 and under £ 7	5.6	Lower professional)	3.5
£ 7 and under £ 10	4.3	Employer or manager)	1 5.1
£ 10 £ 15	8.3	Salaried employee)	2.4
£ 15 £ 20	6.4	Intermediate non-manual)	2 10.9
£ 20 £ 25	7.7	Other non-manual)	3 9.3
£ 25 £ 30	10.0	Skilled manual)	4 14.8
£ 30 £ 35	8.9	Semi-skilled manual)	5 4.8
£ 35 £ 40	7.3	Unskilled manual)	5 8.5
£ 40 £ 45	6.9	Farmer or farm manager)	25.5
£ 45 £ 50	5.8	Other agricultural workers etc.)	5.5
£ 50 £ 55	4.6	Unknown)	6 7.4
£ 55 £ 60	4.2		
£ 60 £ 65	2.8		
£ 65 £ 70	2.8	(Defined in Volume IV, 1971 Census of Population)	
£ 70 £ 75	2.5	Household tenure	%
£ 75 £ 80	1.9	Owned outright	47.7
£ 80 £ 90	2.8	Owned with mortgage from:-	
£ 90 £100	1.8	Tenant purchase	10.1
£100 and over	4.2	Building Society	4.6
		Local Authority	5.3
Disposable weekly household income*	%	Insurance Company	2.1
Under £4	1.2	Other source	1.3
£ 4 and under £ 7	5.7	Rented:-	
£ 7 £ 10	4.3	Local Authority	16.0
£ 10 £ 15	8.8	Other - furnished	3.9
£ 15 £ 20	7.9	Other - unfurnished	6.9
£ 20 £ 25	9.6	Rent-free	2.1
£ 25 £ 30	10.9		
£ 30 £ 35	9.3		
£ 35 £ 40	8.5		

£ 40	£ 45	6.3
£ 45	£ 50	5.5
£ 50	£ 55	4.7
£ 55	£ 60	3.3
£ 60	£ 65	3.2
£ 65	£ 70	2.2
£ 70	£ 75	1.5
£ 75	£ 80	1.3
£ 80	£ 90	2.1
£ 90	£100	1.0
£100 and over		2.6

Gross weekly income of head of household

Under £4		3.2
£ 4 and under £ 7		9.4
£ 7	£ 10	6.6
£ 10	£ 15	11.6
£ 15	£ 20	8.5
£ 20	£ 25	9.7
£ 25	£ 30	11.8
£ 30	£ 35	9.4
£ 35	£ 40	6.6
£ 40	£ 45	5.5
£ 45	£ 50	4.0
£ 50	£ 55	3.0
£ 55	£ 60	2.2
£ 60	£ 65	1.8
£ 65	£ 70	1.3
£ 70	£ 75	1.0
£ 75	£ 80	0.7
£ 80	£ 90	1.1
£ 90	£100	0.6
£100 and over		2.1

Social welfare pensions** as 1% of gross weekly household income	%
90% and over	5.5
80% .. under 90%	0.9
75% 80%	0.6
70% 75%	0.5
65% 70%	0.6
60% 65%	0.5
55% 60%	0.7
Under 55%	90.7

State unemployment receipts† as % of gross weekly household income

90% and over	%	1.1
80% .. under 90%		0.8
75% 80%		0.4
70% 75%		0.2
65% 70%		0.3
60% 65%		0.3
55% 60%		0.4
Under 55%		96.5

State transfer payments as % of gross weekly household income

90% and over	%	10.5
80% .. under 90%		1.4
70% 80%		1.7
60% 70%		2.1
50% 60%		2.4
40% 50%		2.5
30% 40%		3.6
20% 30%		5.7
Under 20%		70.1

* Disposable Household income = Gross Household Income less Direct Taxation.

** Includes social welfare retirement, old age, widow's and orphan's pensions.

† Includes unemployment benefit, assistance, redundancy, occupational injuries etc. payments

APPENDIX 2: Summary 1973 HBS results for elderly persons and married couples living alone.

Item description	Persons 65 years and over living alone.				Married couples where HOH* 65 years and over	
	Males	Females	Old age pensioners	Widows with pension	HOH with old age pension	All cases
Number of households in sample	No. 174	No. 315	No. 273	No. 91	No. 216	No. 381
Adjusted number of households in sample after reweighting	176	349	281	104	210	378
Household size	No. 1.00	No. 1.00	No. 1.00	No. 1.00	No. 2.00	No. 2.00
Average age of head of household (years)	77.80	73.4	75.6	70.5	73.0	71.6
Household expenditure	%	%	%	%	%	%
Food	40.5	40.9	44.8	42.8	41.2	36.7
Alcoholic drink	7.3	0.9	3.6	0.6	6.2	5.1
Tobacco	8.2	2.4	4.8	2.7	7.3	5.7
Clothing and footwear	4.1	5.5	5.7	5.7	7.7	7.3
Fuel and light	10.4	13.0	13.4	14.5	9.5	8.7
Housing	7.2	14.3	12.5	11.7	7.9	8.6
Household non-durables	1.5	1.8	1.8	2.1	1.8	1.7
Household durables	2.3	3.2	1.6	3.6	2.8	3.2
Miscellaneous goods	1.9	2.1	1.8	2.2	2.2	2.4
Transport	5.1	2.4	0.5	1.1	3.3	7.7
Services and other expenses	11.6	13.6	9.7	12.9	10.1	12.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total average weekly household expenditure	£ 9.04	£ 9.16	£ 7.94	£ 8.52	£ 17.20	£ 21.39

% Incidence	%	%	%	%	%	%
Washing machine	2.8	7.4	4.0	6.1	13.0	22.9
Refrigerator	10.7	23.4	15.4	16.0	32.4	42.7
Full central heating	1.6	2.4	1.3	1.3	1.0	5.0
Motor cars	8.7	3.0			10.5	24.6
% Tenure distribution	%	%	%	%	%	%
Owned outright	66.5	44.7	50.7	33.6	50.7	59.2
Owned with mortgage	6.5**	10.3**	10.2**	10.3**	18.8**	14.7**
Rented - Local Authority	12.5	18.7	17.9	25.4	16.2	13.2
Rented - Other	7.7	18.4	14.0	19.2	12.4	10.9
Rent free	6.7	7.8	7.1	8.5	1.8	2.0

*HOH = abbreviation for head of household

**Mainly dwellings owned under tenant purchase agreements

APPENDIX 3: *Expenditure elasticities.*

Item Description	1965-66 HBS urban (Pratschke)	1973 HBS		
		Urban	Rural	State
FOOD				
Bread				
White bread	-0.09	-0.19	-0.05	-0.13
All other bread	0.58	0.51	0.60	0.56
Flour	-0.20	0.08	-0.08	-0.18
Biscuits	0.76	0.53	0.65	0.55
Cakes and buns	0.69	0.69	0.52	0.61
Milk and cream				
Fresh milk	0.14	0.05	0.28	0.12
Other milk and cream	0.14	0.61	0.47	0.59
Cheese	0.62	0.66	0.37	0.54
Eggs	0.52	0.36	0.42	0.34
Butter and other fats				
Butter	0.18	0.01	0.24	0.08
Margarine	0.13	0.31	0.07	0.24
All other fats	0.43	0.53	0.34	0.54
Meat				
Beef and veal	0.79	0.64	1.08	0.81
Mutton	0.59	0.56	0.65	0.51
Lamb	2.85	1.08	1.49	1.19
Pork	1.18	0.85	1.87	1.10
Rashers	0.50	0.61	0.40	0.49
Other bacon	0.30	0.22	0.45	0.30
Sausages, black/white pudding	0.11	0.07	0.44	0.22
Ham-cooked	)	0.88	1.40	1.04
All other meat	)	0.36	0.49	0.45
Fresh fish	0.65	0.69	0.85	0.79
Frozen, dried and cured fish	0.45	0.55	1.05	0.75
Tinned fish	1.00	1.02	0.79	0.79

Fresh vegetables				
Potatoes	-0.05	-0.21	0.17	-0.06
Cabbage	0.16	-0.13	0.18	0.01
Tomatoes	0.75	0.72	0.75	0.69
All other vegetables	0.71	0.49	0.86	0.61
Dried vegetables	0.74	0.50	0.01	0.53
Tinned vegetables	)	-0.01	0.06	0.05
Frozen vegetables	)	0.35	1.32	1.68
			1.68	1.43
Fresh fruit				
Apples - eating	)	0.70	0.83	0.69
Apples - cooking	)	1.16	1.04	1.01
Oranges	)	1.17	0.66	0.76
Bananas	)	0.56	0.52	0.53
All other fruit	)	1.52	1.59	1.55
Tinned and bottled fruit	2.77	0.67	1.24	0.87
Dried fruit and nuts	1.05	1.12	1.00	0.99
Tea	0.09	-0.04	-0.04	-0.06
Coffee and cocoa	1.23	1.03	0.83	1.02
Sugar	-0.07	-0.16	-0.18	-0.17
Jams, marmalade, treacle and honey	0.23	0.34	0.06	0.16
Oatmeal and breakfast cereals	0.39	-0.01	-0.09	-0.04
Rice and other cereals	)	0.57	0.48	0.50
Prepared baby foods	)	0.16	-0.18	-0.18
Jellies, custard and blancmange powder	0.42	0.01	0.29	0.10
Salt, pepper, mustard, sauces and creams	0.42	0.57	-0.02	0.40
Sweets, chocolates and ice cream	)	0.74	0.74	0.74
Fruit and soft drinks	)	1.08	0.89	0.83
All other food	0.76	0.54	0.42	0.53
Meals away from home	3.14	1.98	1.81	1.95
TOTAL FOOD	0.51	0.53	0.51	0.51

APPENDIX 3 (contd) · Expenditure elasticities.

Item Description	1965-66 HBS urban (Pratschke)	1973 HBS		
		Urban	Rural	State
DRINKS AND TOBACCO				
Alcoholic beverages	1.79	1.25	0.99	1.19
Tobacco, cigarettes, etc.	0.59	0.40	0.25	0.35
TOTAL DRINK AND TOBACCO	0.96	0.84	0.60	0.77
CLOTHING AND FOOTWEAR				
Men's clothing				
Outerwear	1.78	1.68	1.11	1.21
Underwear	1.00	1.45	0.28	0.90
Other men's clothing	33.62	0.02	0.12	-0.26
Footwear	19.65	0.90	0.84	0.66
Total men's clothing and footwear	1.33	1.43	0.90	0.99
Boys' clothing				
Outerwear	1.27)	0.34	0.51	0.50
All other boys' clothing	0.36)	0.78	0.06	1.00
Footwear	-15.54)	-1.12	-0.23	-0.83
Total boy's clothing and footwear	0.69)	0.30	0.40	0.47
Women's clothing				
Outerwear	1.59	1.91	1.56	1.74
Underwear	1.07	0.76	0.55	0.61
All other women's clothing	20.76	1.53	0.68	1.18
Footwear	1.24	0.81	0.45	0.60
Total women's clothing and footwear	1.35	1.45	1.01	1.24

Boys and girls
combined

Girls' clothing				
Outerwear	..)	1.54	-0.69	1.38
All other girls' clothing	..)	0.00	-0.51	-0.13
Footwear	..)	-0.81	-0.79	-0.78
Total girls' clothing and footwear	..)	0.88	-1.24	0.80
Other items of clothing		1.46	1.16	0.78
TOTAL CLOTHING AND FOOTWEAR		1.14	1.16	0.78
<hr/>				
FUEL AND LIGHT*				
Gas		0.47	0.00	0.20
Electricity		0.82	0.73	0.87
Coal, coke, etc.		0.08	-0.15	0.06
Turf		0.51	-0.36	-0.69
All other fuel and light		0.10	0.70	0.86
TOTAL FUEL AND LIGHT		0.32	0.35	0.69
<hr/>				
HOUSING				
Rent, rates and water charges				
Privately owned rented dwellings	)	0.99	-1.46	1.15
Local Authority rented dwellings	)	0.09	-2.70	-2.73
Owner occupied dwellings				
Rates, water charges and ground rent		1.03	1.21	1.32
Tenant purchase repayments	)		-0.73	-0.93
House purchase mortgage repayments	)	2.33	1.87	2.38
Insurance (dwellings and contents)		3.04	1.42	1.60
Repairs and decorations	(	3.45**	1.26	1.58
	(	2.15	2.79	
TOTAL HOUSING		0.94	0.85	1.20

* A semi-logarithmic relationship was used by Pratschke for "fuel and light" in respect of 1965-66 (see text)

** Expenditure estimates separately available for owner occupied and rented dwellings, respectively, in 1965-66 HBS

APPENDIX 3 (contd): *Expenditure elasticities.*

Item Description	1965-66 HBS urban (Pratschke)	1973 HBS		
		Urban	Rural	State
HOUSEHOLD NON-DURABLE GOODS				
Domestic non-durable goods				
Matches	0.12	0.06	-0.10	-0.01
Soap and other cleaning materials	0.51	0.24	0.46	0.31
Polish	0.35	0.43	0.25	0.31
All other domestic non-durable goods	1.21	0.73	1.14	0.89
Personal non-durable goods				
Toilet and shaving soaps, toothpaste	0.71	0.72	0.37	0.67
Hair oil, shampoos etc.	1.38	1.21	1.02	1.14
Cosmetics and manicure preparations	0.67	1.52	1.35	1.51
All other personal non-durable goods	0.67	0.57	0.31	0.47
TOTAL HOUSEHOLD NON-DURABLE GOODS	0.74	0.71	0.60	0.68
HOUSEHOLD DURABLE GOODS				
Furniture, floor covering and curtains	1.13	1.91	-0.70	1.90
Electrical/gas appliances (including repairs)	1.23	1.58	2.91	1.92
Other household furnishings and appliances	3.34	2.86	1.25	1.75
Ironmongery and hardware	2.80	1.58	2.59	1.83
Crockery and glassware	1.37	1.57	0.65	1.38
Bedding	0.89	0.18	0.65	0.62
Household cloths	1.06	1.69	0.10	0.91
All other household durable goods	1.29	1.30	1.26	1.17
TOTAL HOUSEHOLD DURABLE GOODS	1.20	1.61	1.73	1.61
MISCELLANEOUS GOODS				
Personal durable goods	2.02	1.50	2.06	1.75
Newspapers	1.10	0.63	0.79	0.72
Magazines, books and reading materials	1.50	1.34	1.28	1.30
All other miscellaneous goods	1.50	1.65	1.36	1.66

TOTAL MISCELLANEOUS GOODS		1.33	1.18	1.34	1.28
TRANSPORT					
Vehicle expenses					
Motor cycles	)	3.74	1.64	4.17	2.72
Motor cars	)		1.69	2.05	1.79
Other vehicles		0.51	0.33	-0.21	-0.40
Motor tax		3.49	1.44	1.47	1.43
Motor Insurance		3.64	1.68	1.65	1.66
Petrol	)		1.49	1.80	1.56
All other vehicle expenses	)	2.28	1.76	1.19	1.40
Travelling expenses					
Bus fares		1.19	0.72	-0.52	0.66
Train fares		2.88	1.66	1.77	1.74
All other travelling expenses		4.75	1.18	0.14	0.74
TOTAL TRANSPORT		2.00	1.52	1.65	1.55
SERVICES AND OTHER EXPENDITURE					
Entertainment					
Cinema and theatre		1.44	1.40	2.14	1.70
Dancing		3.11	1.71	1.65	1.58
Other entertainment		3.16	1.90	1.35	1.86
Education and training					
First and second level	)		1.17	3.21	1.28
Thrd level	)	2.09	2.50	4.75	2.88
Other	)		0.97	2.44	2.22
Medical expenses					
Fees to doctors, dentists and opticians		4.58	2.25	2.71	2.52
Medicines		1.51	1.15	1.31	1.21
Other medical expenses		1.65	1.58	2.64	2.13

APPENDIX 3 (contd). *Expenditure elasticities.*

Item Description	1965-66 HBS urban (Pratschke)	1973 HBS		
		Urban	Rural	State
Insurance and pension contributions				
Voluntary health insurance)		3.52	5.13	3.97
Pension Funds)	3.94	3.04	5.26	3.48
Life insurance (excluding house purchase)	1.39	1.41	1.77	1.61
House purchase endowment policies)		3.67	0.54	4.01
Other insurance)	1.60	1.78	3.93	2.55
Personal services				
Hairdressing	1.25	1.34	1.54	1.44
Shoe repairs	0.69	0.89	1.92	1.19
Laundry, cleaning and dyeing	1.28	1.07	1.04	1.19
Other services	4.32	2.11	2.92	2.36
Other expenditure				
Postage)		1.29	1.00	1.16
Telephone and telegrams)	1.83	1.64	2.56	1.96
Church, charity club and society contributions	1.36	1.41	1.43	1.39
Trade union/association contributions		2.02	3.15	2.39
TV rent	0.24	0.20	-1.79	0.17
Licences	0.56	0.41	0.82	0.58
Hotel expenses and expenditure abroad	6.47	3.24	3.77	3.01
All other expenditure	1.66	1.51	1.46	1.45
TOTAL SERVICES AND OTHER EXPENDITURE	1.52	1.56	1.74	1.68

DISCUSSION

Rita Sheridan: In proposing the vote of thanks I wish to congratulate Mr. Murphy for a paper of depth and scope. The Household Budget Survey aside from the main purpose as stated by the author appears to have implications for social policy in the sphere of redistribution of income and social benefits. Also the HBS is a useful educational aid particularly to personnel in the Agricultural Advisory Service dealing with questions of farm household and farm expenditure. The inclusion of the rural sector in the current ABI is to be particularly welcomed. The publication of this type of material tends to promote discussion and makes people more budget conscious.

In times of rapid changes in money values regular information of this type is very desirable and one would hope that tentative plans for a repeat in 1978 can be realised and that farm households can again be included. I note that the continuous small sample only applies to urban households. The paper mentions delay in publication but in fairness this does not seem unduly long. The response rate was disappointing, this is of concern to agencies carrying out surveys or relying on survey information. Apparently substitution did not improve response rate and the gratuity does not seem to have proved an inducement either.

The paper mentions the difficulties associated with farm household income and expenditure recording. It does not appear possible to compare the farm household income as given in the HBS with An Foras Taluntais figures as there are different concepts and basis of compilation. Even allowing for understatement of income there seems to be a considerable disparity between gross household weekly income and total weekly expenditure (Table 4). Expenditure exceeds income in all cases where income is less than £30 per week. In the case of the low income farm families, the relatively narrow gap for saving and investment could be particularly difficult. Many of these are living in sub-standard housing and the only way to get themselves out of this situation is to expand and intensify, both approaches being very demanding on financial resources. Living beyond their means seems to be particularly associated with low income categories and while this may appear due to an understatement of income, might it also not indicate some degree of living on savings or credit?

Farm households appear to spend a higher proportion of total expenditure on food than urban households, but there is not a great deal in the difference between the absolute figure for food between the two groups. Perhaps the figure £3.42 for home produced food at retail price gives an artificially high figure. It may be that home produced food is used more lavishly than purchased food and perhaps more is given to domestic animals.

Transport is the next highest claim of expenditure across all groups, being such a significant item this may be considered as having important implications in terms of population relocations and the location of necessary institutions. For instance, it may well be that part of the costs of relocating people or closing local schools or hospitals is borne by the consumers of these services, so that economies to the State may mean more expense to consumers. In Table 3 transport costs appear as lowest in the case of farm households. One often hears a different view put forward.

In the report, a certain emphasis seems to be placed on rural/urban comparisons and differences. We do not have trend data to show these over time but one suspects that the rural non-farm household besides being an increasing segment is also a varied one. Table 4 in the paper shows limited differences between urban and rural when the comparison is made between social groups. So, from a sociological point of view, one would like to have equal emphasis on social group comparisons as well as on urban/rural, a dichotomy which is becoming less real.

Reference is made in Tables 15 and 20 to the 14 percent of single person households and the number of elderly men living on their own in country areas with the even greater number of elderly women living alone in urban areas. The expenditure figures relating to food and fuel show very little left over for any other expenses. This highlights a social problem which is possibly expanding.

In conclusion, I request to the President to convey thanks and good wishes for future work from the meeting to Mr. Murphy.

J. MacAirt: In seconding the vote of thanks, I congratulate Mr. Murphy on the excellent work he has obviously put into this Inquiry, as well as that in 1965-66, and wish him to convey to the CSO staff involved, the very great appreciation of, I am sure, all the members of the Society for the trouble and care that has gone into the published Report. I wish also to pay tribute to the high professional standards aimed at and attained by the Central Statistics Office in its work, of which this is an example. No matter what controversy arises within the country, all parties know they can place complete trust in the accuracy of work published by the CSO, that is relevant to the questions at stake.

On p. 136, the author mentions the inter-relation between the two sets of expenditure data for each family in 1965-66 - a factor avoided in 1973, by having each family co-operate only once. In common with others, I have wondered how high in fact was this inter-correlation?

On p. 139, the overall response rate of 57 percent is termed disappointing. This makes one wonder if certain kinds of households, perhaps the uneducated or those with many school-going children, are less likely to co-operate than others in such detailed surveys, as Prais and Houthakker (1) remarks, and hence are inadequately represented in the official Report?

On p. 153 is 'in the country' a misprint for 'in the sample'?

On p. 169, could the author tell us roughly the number of man-hours put into the work within the CSO, so that the total costs of the Survey be arrived at?

On p. 169, practical problems may well arise with the Sampling Frame for the continuous annual survey, according as we get further away from the last Census in 1971. On the same page, Goreux (2) makes an interesting comparison between household budget surveys in many countries even outside EEC.

On p. 170, perhaps 1978 might be a little premature for the next large-scale Inquiry, given that we now have an annual one on a small scale.

To conclude, I cannot resist telling the story of one of the families chosen randomly for the 1973 Inquiry. It happened that on the 10th day of the fortnight, for which they were keeping records, the husband and wife were due to fly on holidays to the Costa Brava. Conscientiously, they brought out with the luggage all their household expenditure diaries etc., to Dublin Airport, only to find, half an hour before take-off, that they had forgotten their passports!

REFERENCES

- (1) Prais and Houthakker 'The analysis of family budgets', Cambridge Univ. Press (1972).
- (2) L. Goreux 'Income and food consumption', Monthly Bull. FAO. Vol. ix No. 10 (1960).

Professor R. O'Connor: Mr President, I have pleasure in being associated with the vote of thanks to Mr. Murphy for his most interesting and well-written paper. Seldom now-a-days do we get papers which are so carefully put together and when we do the fact should be acknowledged. He is also to be congratulated on getting the results out so soon in view of the immense scrutiny and computing problems involved.

The first point I wish to make relates to the cost of the survey. I note that £130,000 was paid for fieldwork on an average of £17 per household surveyed. A household with farm accounts, however, cost almost six times as much as an urban household or an average of about £39 per farm household. This high cost is very disturbing but, of course, is not unexpected. The pilot work for rural household budget surveys was done some years ago by Sile Sheehy and myself and the CSO adopted our recommendations relating to the estimation of farm incomes almost to the letter. We knew at the time that the necessary farm accounting would be costly but having the full figures in front of us now puts the matter in its sombre perspective.

These figures indicate that we must give the matter some further consideration. Two main questions arise:-

1. Is it really necessary for the CSO to continue collecting farm income data in the future in the HB surveys and if so;
2. Is there a cheaper way of doing it than by using farm accounts?

The answer to the first question raises the whole purpose of household budget surveys. In the past it was generally held that the main purpose of HBS studies was to provide a weighting system for the consumer price index (CPI). It was believed that surveys should be conducted at regular intervals for the purpose of bringing these weights up-to-date. Up to now the Irish CPI had been based on expenditure patterns in urban households and over the years there had been strong demands for the inclusion of rural expenditure patterns in the weighting system so as to have the index more broadly based. The assumption here was that different trends in the CPI would emerge if rural households were included.

The results of the current and previous household budgets show that the different weightings used as a result of these inquiries make little or no difference to the CPI. The first CPI - sample (308) was based on a very small HBI - carried out in 1922. There was much criticism of this foundation throughout the 1930s and 1940s and many people expected to see large changes in the index when the results of the 1951-52 HBI were produced. No such changes occurred. Again in the late 1950s and early 1960s it was claimed that the weighting pattern was again out of date and this time there would surely be changes when a new HBI was used to provide weights. No such changes occurred with the 1965/66 HBI, and as we can see the inclusion of rural areas into the present budget makes no difference to the result. One further point should be raised in this connection.

Recently the National Prices Commission drew attention to the urgent need for separate price indexes for different groups within the community and especially for pensioners and others with relatively low incomes (National Prices Commission, *Monthly Report*,

October, 1973). Their conclusion was based on the fact that different groups had different expenditure patterns and it was more or less suggested that weighted price rises would be different for different groups. This thesis was examined by Dr. Kieran Kennedy and Mr. Richard Bruton in an article in the October, 1975 *Quarterly Economic Commentary* using different weights for households with different levels of income. They found little difference in the index when different weighting systems were used even though the weights for certain items like food differed widely as between high and low income households. In the under £10 a week households with 7 or more people in 1965/66, food accounted for 53 percent of expenditure while in the over £30 a week households with 1 - 2 persons the food bill only accounted for 21 percent of expenditure. Yet when separate indices (based on 114 items of expenditure) were calculated for each of these classes of households for the period 1968-1975 the new indices did not differ significantly from each other or from the official figures.

This result was very surprising and would lead to the conclusion that in normal circumstances weights for the CPI are not as important as many people think. The fact that the sum of the weights must always equal 100 makes for great stability in the whole system. We must not conclude from this, however, that HBI's could be dispensed with if their sole purpose was to provide CPI weights. It is necessary to revise weights fairly frequently for three reasons.

1. Unless this is done people tend to lose confidence in the Index. We can apply a legal maxim to the CPI and say 'not alone must it be good but it must appear to be good' and appearance tends to be associated with frequent updating of weights.
2. Changed weights can affect individual items like food, fuel, etc. Table 23 shows that there are some differences between individual items when the present and former indices are compared.
3. The third reason is related somewhat to the first two. Where there are sharp price changes between two periods, such as occur when new subsidies or taxes are levied or old ones removed the weighting system can become important. Kennedy and Bruton (in the paper cited above) showed that between individual years fairly large differences occurred with different weighting systems. For example, in the year February 1970 to February 1971 when the official CPI rose 10 percent, the price rise for the weakest class (7 or more persons with a household income of less than £10 per week) was only 8 percent while one of the better-off households (3 - 4 persons with a household income of £30 and over) had a price rise of 11 percent. We can conclude from this and for technical reasons relating to the whole concept of index numbers (which I will not go into) that it is always best to have the most up-to-date weights possible. Fairly frequent HBI's are therefore called for.

Despite this I would argue that if the main purpose of a HBI was to obtain data for weighting the CPI then we could get away with new and much cheaper type surveys particularly in relation to the collection of income data. It is generally agreed now that HBI's have many other, far more important, uses. They show expenditure patterns in different

classes of households and are therefore important for numerous policy purposes. They can be used also for estimating the incidence of subsidies and taxes among different income groups and within different regions of the country. But more recently they are being used extensively in the study of income distribution patterns among different groups and it is for this reason that interest is focusing more and more on the income aspects of the survey.

Now if HBI's are to be used for income distribution purposes the figures must be fairly accurate and it seems at the moment that there is little alternative to keeping farm accounts on medium-to-large farms, despite the cost. Indeed these are the firmest income figures available. There is no doubt but that all the other income figures are understated. This is not surprising particularly in houses where there are a number of earners. Certain members may not be making their full contribution to the family budget and so will tend to understate their incomes. We must reconcile ourselves to the fact that if policy-makers want more and better statistics they will have to pay for them; statistics do not come cheaply anymore. You can no longer run a national statistics office on a shoestring, as we did in this country for years and years.

Having said this, however, I should add that it behoves statisticians and other research workers to devise the cheapest possible methods of doing a job. There have been many developments in data collection since the ESRI pilot survey almost ten years ago and it is time that we looked at the question again in the light of present experience and methods. In this connection I have been in touch with the Agricultural Institute and the Rural Economy people there are prepared to co-operate on further research in this area if funds for such a project can be made available. The research would involve drawing a sub-sample from the Institute's account keeping farms, filling up a schedule at one visit to these farms, calculating income from this schedule and comparing the results with those from the accounts. The CSO could then judge if the level of accuracy obtained was adequate. With the availability of computer and a lot of experience in making sub-estimates from accounts the Institute may possibly be able to do better now than I could do eight years ago. It is worth trying in any case.

These are the main points I wish to make and may I again congratulate Mr. Murphy on his paper.

Dr. Geary (with some afterthought): This is a great occasion. I warmly congratulate Mr. Murphy, the President (in his dual capacity) and CSO on the completion of this very large scale survey, in fact one of the most important social documents in regard to Ireland ever to appear. It will afford material for research for years. I congratulate the lecturer on the content of his paper and the way he presented it.

Other speakers have referred to the immense amount of work involved in a HB survey. As closely associated with the HBS of 1951-52 I can endorse that opinion. I would like to pay a particular tribute to the field interviewers whose work is so exhausting and frustrating.

As to the lowish response rate may I suggest that £1 a form payment is far too low. It was even too low in 1951-52. I tried to improve the look of it by making a lottery of the sum available then, but was turned down flat. I still think it a good idea. People think far

more of their chance of winning £100 than of £1, which is what their chance would be worth.

Like Queen Mary and Calais when I die many things will be found embedded in my heart, two at least pertaining to the HBS. One is the understatement of expenditure on drink. I may say at once that I agree with Mr. Murphy's treatment, i.e., of blowing up uniformly the grossly understated figures returned. In Table 6 he should have corrected the obviously understated figure for drink in 1951-52 to compare with 1965-66 and 1973. In 1973 did he not find it necessary to correct for expenditure on tobacco too?

Another problem is the discrepancy between household income and expenditure - see Table 4. I have always believed that this is due more to understatement of income than to overstatement of expenditure because there are no built-in checks for income and plenty for expenditure. In 1951-52 the two were collected separately for reasons that seemed obvious then. Now I think that income-earners should be challenged about any large discrepancies at individual household level - where did the money spent come from? The process will be difficult and expensive but it is important. We really need to know about personal saving or dissaving and the HBS is where to get it

The new tables about the Social Security classes are particularly welcome.

Since Table 5 contains comparisons of regions, essentially a welfare comparison, I am puzzled at his exclusion of retail value of own consumption by farmers. An optimistic view can be taken of the per household showing of this table. On average, material living standards do not vary so much between regions. I suggest that he add a line showing "expenditure per household" to the table.

I have had time only for a brief glance (at this meeting) at the table of expenditure elasticities for individual commodities. By the test beloved of official statisticians that extreme values are wrong, the table makes a better showing than do tables based on previous HBS's. There is also a fair indication of reduction over time of high values on the previous occasion, i.e., of one-time luxury goods tending towards necessary status, confirming other tables in this excellent paper of a marked advance in the status of the Irish people, probably of all classes, though the latter remains to be seen.

Michael Stuart: I would like to join with other speakers in complimenting Mr. Murphy on his very interesting and well prepared paper. Mr. Murphy had ably dealt in advance with two frequently made criticisms of the HBS. I will take advantage of this reference to make what may seem a somewhat tangential remark. Dr. MacAirt has already complimented the CSO for the high standards they maintain in their work, often under adverse conditions. I would like to suggest that critics ought not to direct all their criticism at the personnel of the CSO but rather reserve a good portion for the Government. It is well known that the CSO is understaffed and cannot do all that it would like to do, nor satisfy the demands made of it by users of official statistics. In hard times, of course, one should not expect expansion of the service. There might be some expectation, however, that the operations of the CSO would not be cut back, as happened recently with the cancelling of the planned partial census for the sake of a relatively paltry sum of money. The suspicion exists that this (or any) Government would make such a cutback for political reasons, not wanting to have their worst fears confirmed. In this case, these fears are particularly real

in the light of Dr. Brendan Walsh's recent startling demographic projections. These projections surely highlight the absolute necessity of reliable and up-to-date data if proper planning is to take place to avoid the worst consequences of Dr. Walsh's projections, (assuming they are realised).

Perhaps the time has come for this Society, representing the statistical expertise in the country, to take on a more positive role in informing Government and Public about the relevant issues on which it is qualified to speak. The American Statistical Association has on a number of occasions made important contributions of this nature in the United States. Article 20 of the Society's Laws and Constitution permits such action. Perhaps the incoming Council could give some thought to this matter.

My second point relates to the remark made by Mr. Murphy concerning the low response rate relative to that obtained in the 1965-66 urban survey. He says "This would indicate that there had been a significant deterioration in the willingness of the public to participate in this type of comprehensive survey relating to personal matters." An obvious source for this problem is that people are getting tired of being surveyed. It has been reported from some working class areas of Dublin that some households have been included in surveys five or six times in the space of a few years. I recall a market researcher remarking a couple of years ago that market research organisations had begun to notice a real decline in their survey response rates, and he attributed this to over-surveying. There is no doubt that there are many surveys carried out, both local and nationally, whose worth is questionable. It is clearly very difficult to exercise any control over this over-surveying. Nevertheless, perhaps, here again the Society could act by sounding a note of warning in the right quarters, not least in academic social research circles.

Before leaving the response rate problem, I would like to take issue with a previous speaker who suggested that the blame for the relatively low response rate should rest with the less well educated. This was on the basis that such people were generally less well organised and tended to have larger families which might inhibit their participation. On the other hand, Mr. Murphy provides some factual basis for a different conclusion when, in the section on Non-Response and Correction by Reweighting, he states "The greatest increase in weighting was necessary in respect of rural farm households which were under-represented in all acreage classes. This was due *principally* to the fact that any "*medium-to-large*" farm which dropped out of the maintenance of farm accounts could not be substituted for. This under-representation was *not* very pronounced for *large households*. Urban households consisting of a relatively *small* number of people, those in *social groups* 1, 2, 6 and those located in the Dublin region and in small towns under 1,500 inhabitants were also under-represented." (Emphasis inserted). This passage, particularly the parts I have emphasised, points clearly in a direction opposite to the previous suggestion I have mentioned. Rather, it implicates the better-off sections of society who have, in any case, a long and well-documented history of being less than co-operative in volunteering information concerning their incomes and related matters. I suggest that it is inappropriate that unfounded allegations should be made concerning the less privileged sections of society.

My final point relates to a development I understand is due to take place, and that is a report on the incidence of Tax and Social Welfare benefits, on the lines of a similar study published annually in Economic Trends, based on the UK Family Expenditure Survey.

I and two of my colleagues in the Statistics and Operations Research Laboratory of Trinity College have been engaged in a model-building exercise, to effectively model the incidence of tax and social welfare benefits, and thereby produce a useful tool for both planning and research. We have constructed a preliminary model, based on direct taxes and benefits only. (We are at present preparing for publication some material on this). The extension of the model requires as a basis a detailed study of the kind to which I have referred. Perhaps Mr. Murphy can tell us what is the status of the CSO study and whether he has encountered or foresees any special problems which might arise in using the 1973 HBS for this purpose.

May I conclude by again associating myself with the compliments and congratulations being offered to Mr. Murphy.

Mr. Linehan: I would like to add my own personal congratulations to Mr. Murphy not alone for giving us this paper but also for the Report already published and those to follow. Official publications are anonymous but it is no secret that Donal Murphy is HBS designer and dynamic worker.

He has shown in the paper the many ways in which household results of this kind can be used. Apart from the functional use as weights for the Consumer Price Index, their use for comparisons and contrasts of expenditure levels and structure for different types of holdings is the most important.

By its very nature household expenditure does not permit the separation of data on individual expenditures. However, as the author has stressed, the household size and composition must be taken into account in making comparisons between different categories. This was illustrated strikingly in Tables 10 and 11 which showed the average household expenditure to be only 4 percent below the UK figure but average per head expenditure was one-third below the UK level. This brings us to the question of trying to express household composition in terms of the "equivalent units".

An appraisal of different methods of estimating equivalent scales by J. L. Nicholson which appears in the March 1976 issue of "The Review of Income and Wealth" indicates clearly the wide range of approaches used for this problem. Apart from the practical problem of derivation, the determination of scales depends very much on the specific purpose in mind - whether equivalent from nutrition or dietary viewpoint is involved in total expenditure or general standard of living etc.

The importance may be illustrated by reference to Table 16 of the Paper where average household size and average weekly expenditure appear for households of varying compositions. From these I have derived average expenditure per head. I have taken from Nicholson's article equivalent scales based on total expenditure derived from the UK Family Expenditure Survey 1959-65, and used these to derive expenditures per unit. This scale takes as a basis two adults - 2.00 and other households composition accordingly, e.g.

1 Adult	= 1.28
2 Adults	= 2.00
2 Adults + 1 Child	= 2.26
2 Adults + 2 Children	= 2.50 etc.

There are two many figures involved to present orally the complete comparisons between the crude comparisons and those on the equivalence basis, but two illustrations will help. Taking two Adults as a reference here of 100 the Adult households comprise as follows:-

	Crude	Equivalence		
1A	92	72)	The Crude comparison gives expenditure approximately proportional to number of Adults. Equivalence shows higher standards for increasing size.
2A	100	100)	
3A	94	109)	
4A	100	129)	

The second, again taking Two Adults as reference base, is for households with 2 Adults and differing number of children:-

	Crude	Equivalence		
No Child	100	100	)	The Crude basis conveys an impression of a rapidly declining standard which contrasts strikingly with that shown by the Equivalent basis.
1 Child	98	130)	
2 Children	85	136)	
3 Children	68	121)	
4 or more children	49	109)	

Naturally, the fundamental question regarding an inquiry such as this is the validity of the results. There are two aspects to this - the representation of the sample and the accuracy of the information collected. For comparisons between different types of households it is enough to have sufficient households of each type to provide reasonably stable averages; for the derivation of aggregate estimates or for derivation of frequency distribution it is essential to have the correct proportion of the different types of households. The paper and the Report have demonstrated the substantial effort made to offset any bias resulting from the high non-response. It is possible that further experimentation may suggest the use of additional central factors - thus in Appendix 1, final column, the resultant frequency of household tenure shows :-

	Household Budget (Adjusted)	1971 Census
Rented Local Authority	16.0	15.5
Rented - Other	10.8	13.3
Tenant Purchase	10.1	9.8
Owner Occupied	61.0	59.0
	97.9	97.6

If tenure were used as a central factor this difference would vanish.

On the question of accuracy it is interesting to observe the consistency experienced between the results of the 1965/66 and the 1973 Surveys. When the cumulative frequency distribution of Gross Household income for urban areas is plotted for both years on the same logarithmic scale, the 1973 graph parallels that for 1965/66 and the distance between them is equivalent to a factor of just over 2 - in line with the rise in the CPI from 100 to 212 in the interval.