SECTION G

FOOD STAMP PROGRAMME

TABLE G-1
PERCENTAGE DISTRIBUTION OF INDIVIDUALS IN TERMS OF APPLICATION FOR, AND RECEIPT OF FOOD STAMPS, BY AREA AND QUINTILE

Classification	Receiving Food Stamps	Not Receiving Food Stamps		
		Applied	Never Applied	Total
Area				
KMA (N=2,036)	3.5	1.9	94.7	100.0
Other Towns (N=1,374)	5.4	3.4	91.3	100.0
Rural Areas (N=3,699)	9.5	5.0	85.5	100.0
Quintile				
Poorest (N=1,418)	14.2	4.0	81.8	100.0
2 (N=1,415)	8.13	5.1	86.8	100.0
3 (N=1,418)	6.8	4.2	89.0	100.0
4 (N=1,430)	3.5	4.5	92.0	100.0
5 (N=1,428)	1.5	1.9	96.6	100.0
Jamaica (N=7,109)	6.8	3.9	89.3	100.0

Note: Regional and Jamaica percentages adjusted for non-response.

TABLE G-2
DISTRIBUTION OF INDIVIDUALS RECEIVING FOOD STAMPS, BY AREA AND QUINTILE

Classification	Number of Individuals Receiving Food Stamps	Percentage of Total Recipients
Area		
KMA	55	16.1
Other Towns	73	14.6
Rural Areas	355	69.3
Quintile		
Poorest	201	41.6
2	115	23.8
3	96	19.9
4	50	10.4
5	21	4.4
Jamaica	483	100.0

Note: Percentages adjusted for non-response.

TABLE G-3
NUMBER AND PERCENTAGE OF ELIGIBLE INDIVIDUALS RECEIVING FOOD STAMPS, BY BENEFICIARY CATEGORY, AREA AND QUINTILE, 1993-1994

Classification	Beneficiary Category											
	Children Aged Less Than Six Years+				Pregnant/Lactating Women				Elderly/Poor/Disabled			
	1993		1994		1993		1994		1993		1994	
	N	%	N	%	N	%	N	%	N	%	N	%
Area												
KMA	186	11.6	153	15.1	32	0.0	32	5	141	17.6	73	32.9
Other Towns	153	24.0	145	19.1	25	12.8	27	13.4	81	36.4	80	31.2
Rural Areas	380	38.8	381	31.7	59	1.5	65	11.3	350	46.9	338	45.2
Quintile												
Poorest	197	38.7	181	36.5	30	6.7	33	18.2	142	52.1	140	57.1
2	184	30.4	167	22.2	36	2.8	31	6.5	122	50.8	136	38.2
3	140	30.0	131	25.2	25	0.0	24	12.5	111	27.0	105	40.9
4	134	16.4	126	13.5	19	5.3	18	16.7	110	32.7	67	32.9
5	64	13.1	74	10.8	6	0.0	18	0	87	19.5	43	9.3
Jamaica	203	28.3	679	23.7	116	3.4	124	11.3	572	37.7	491	40.9

Note: (i) 'N' means number of eligible individuals in sample.
'%' means percentage of eligible individuals receiving food stamps.

(ii) +For SLC 1992, the maximum qualifying age limit for children was under 5 years.

(iii) Regional and Jamaica percentages adjusted for non-response.

(iv) *Quintile percentages for the elderly revised for 1992.

TABLE G-4
PERCENTAGE OF HOUSEHOLDS RECEIVING AND NOT RECEIVING FOOD STAMPS, BY AREA AND QUINTILE

Classification	Receiving Food stamps	Not receiving food stamps		
		Applied	Never Applied	Total
Area				
KMA (N=604)	9.14	5.52	85.34	100.0
Other Towns (N=389)	15.39	9.95	74.66	100.0
Rural Areas (N=946)	28.15	14.8	57.05	100.0
Quintile				
Poorest (N=271)	53.87	16.61	29.52	100.0
2 (N=308)	28.25	17.86	53.90	100.0
3 (N=344)	22.67	13.37	63.95	100.0
4 (N=425)	10.82	10.82	78.35	100.0
5 (N=591)	3.55	4.23	92.22	100.0
Jamaica (N=1,939)	20.5	11.7	67.8	100.0

TABLE G-5
NUMBER AND PERCENTAGE OF HOUSEHOLDS RECEIVING FOOD STAMPS, BY AREA AND QUINTILE

Classification	Households Receiving Food Stamps (N)	Percentage of Total Recipients (%)
Area		
KMA	48	16.5
Other Towns	59	15.4
Rural Areas	271	68.07
Quintile		
Poorest	146	38.6
2	87	23.0
3	78	20.6
4	46	12.2
5	21	5.6
Jamaica	378	100

TABLE G-6
PERCENTAGE DISTRIBUTION OF NUMBER OF RECIPIENTS IN HOUSEHOLDS RECEIVING FOOD STAMPS, BY AREA AND QUINTILE

Classification	Number of Recipients in Household			
	One	Two	Three or more	Total
Area				
KMA (N=47)	70	30	0	100.0
Other Towns (N=59)	77	23	0	100.0
Rural Areas (N=271)	74	21	5	100.0
Quintile				
Poorest (N=146)	71	23	6	100.0
2 (N=87)	71	25	4	100.0
3 (N=78)	78	21	1	100.0
4 (N=46)	91	9	0	100.0
5 (N=20)	95	5	0	100.0
Jamaica (N=377)	76.13	20.42	3.45	100.0

Note: Regional and Jamaica percentages adjusted for non-response.

TABLE G-7
NO. OF ELIGIBLE HOUSEHOLDS AND PERCENTAGE RECEIVING FOOD STAMPS, BY BENEFICIARY CATEGORY, AREA AND QUINTILE

Classification	Children Aged Less Than Six Years		Pregnant/ Lactating Women		Elderly/Poor/ Disabled	
	N	%	N	%	N	%
Area						
KMA	169	18.79	32	5.0	85	58.2
Other towns	139	22.23	27	20.7	90	66.0
Rural Areas	350	36.59	68	18.3	347	77.8
Quintile						
Poorest	160	48.8	35	25.7	170	85.9
2	139	26.6	30	10.0	121	71.9
3	137	26.3	25	16.0	105	74.3
4	124	14.5	17	17.7	76	60.5
5	98	14.3	20	10.0	50	40.0
Jamaica	658	28.5	127	14.9	522	72.0

Note: (1) 'N' means number of eligible households in sample.

'%' means percentage of eligible households receiving food stamps.

(ii) Regional and Jamaica percentages adjusted for non-response.

(iii) Eligibility for single member families with income below $7,000 and families with income less than $18,000 cannot be determined with sufficient accuracy since consumption measures are used as a proxy for income.

TABLE G-8
SELF-REPORTED REASONS (PERCENTAGE) FOR HOUSEHOLDS NOT APPLYING FOR FOOD STAMPS, BY AREA AND QUINTILE

Classification	Reason					
	Did Not Consider Household Eligible	Did Not Know How to Apply	Not Worth the Trouble	Did Not Want Stigma	Other	Total
Area						
KMA (N=520)	49.1	17.9	19.6	7.6	5.8	100.0
Other Towns N=288)	48.0	18.5	13.8	8.3	11.5	100.0
Rural Areas (N=534)	42.5	24.7	20.6	6.9	5.4	100.0
Quintile						
Poorest (N=80)	20.0	41.3	18.8	6.3	13.8	100.0
2 (N=165)	25.5	43.6	17.6	6.1	7.3	100.0
3 (N=220)	33.6	25.0	22.7	9.6	9.1	100.0
4 (N=332)	43.9	15.4	25.9	7.8	6.9	100.0
5 (N=545)	60.0	12.3	15.4	7.9	4.4	100.0
Jamaica (N=1,342)	45.0	20.7	19.7	7.8	6.7	100.0

Note: Regional and Jamaica percentages adjusted for non-response.

TABLE G-9
PERCENTAGE DISTRIBUTION OF AREAS IN WHICH SELF-REPORTED PROBLEMS IN OBTAINING FOOD STAMPS OCCURRED, BY AREA AND RELATIVE FREQUENCY OF PROBLEMS IN JAMAICA

	Problem								
Area	Lateness/ Absence of Officer	Rudeness of Officer	Disorder-liness of crowd	Inadequate Accom-modation	Transpor-tation Difficulties	Long Lines	Not in Mail	Other	Total
KMA	0.0	0.0	16.5	51.8	19.8	37.3	66.3	36.5	-
Other Towns	30.8	23.2	41.0	0.0	0.0	10.0	33.7	10.9	-
Rural Areas	69.2	76.8	42.3	48.2	80.2	52.7	0.0	52.6	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-
Jamaica	16.1	7.6	21.9	3.7	9.6	17.7	7.3	16.1	100.0

APPENDICES

APPENDIX I

SURVEY DESIGN

1 Detailed documentation on the survey design and relevant technical aspects have been included in the Survey of Living Conditions (SLC) since 1992 in the form of two Appendices. Appendix I provides the details on how the survey was conducted and Appendix II gives the basic information on the methodology adopted for annualising the expenditure data collected in the survey and the description of the relevant variables and their sources. In this report, one more Appendix (Appendix III) is included. This presents a brief report on the results of the two experimental consumption modules, namely, the point of purchase module and the shortened item-by-item consumption questionnaire canvassed in SLC 94.

I. Household questionnaires

2 The survey instrument for the SLC is a household questionnaire, the core of which is basically the same from round to round to ensure continuity and comparability for effective monitoring of the Human Resources Development Programme (HRDP). However, in each round starting with the third round, emphasis was placed on obtaining a wide spectrum of data on one particular social sector to provide the basic data used in policy formulation, as shown in Appendix I.1.

TABLE APPENDIX I.1
FOCUS IN SLC ROUNDS, 1989 TO 1994

SLC round	Focus Topics	Associated Questionnaires
SLC 89-2	Expanded Health Fertility Last Pregnancy	Public Primary and Secondary & Tertiary Health Services Private Primary and Secondary & Tertiary Health Services
SLC 90	Expanded Education	Primary & Secondary School Administrators Primary & Secondary School Teachers
SLC 91	Expanded Housing	
SLC 92	Poverty	
SLC 93	Employment & Time Use Social Mobility	
SLC 94	Experimental Consumption Modules	

POINT-OF-PURCHASE MODULE

3 The two alternate formulations of the shortened versions of consumption modules tested in SLC 94 were designated as (i) point of purchase module; and (ii) the shortened item by item consumption module. The point-of-purchase module was designed to collect information from the household on the amount spent at different shops, rather than the item-by-item expenditures, as it was felt that it would be easier for the respondent to recall the total amount spent at each shop. The module used was very similar to that used in the pilot test in 1991. The larger sample used in SLC 94 will allow more accurate comparisons. A few improvements had also been made in the wording of some of the questions. The questions on home production and gifts (included in the 1991 pre-test version of point of purchase module) were omitted here because they account for a relatively small proportion of total consumption and the data collected in the standard modules could be used for purposes of comparison of total consumption. The questions on housing also were not repeated in the point of purchase module and remained as a part of the housing module.

SHORTENED ITEM-BY-ITEM CONSUMPTION MODULES

4 The shortened item-by-item consumption module was designed on the same pattern as the standard module, but with further condensing of the item groups. For instance, instead of investigating 14 items on different kinds of meat used in the standard consumption module, only three items were used in the shortened version, to describe all kinds of meat.

5 The main reason for grouping the items was to produce a group meaningful to respondents and for which it would be easy to make comparisons with the standard modules. The total number of items in these modules has been reduced from 119 in the standard module to 37 items as follows: daily expenditures from 6 to 4; food expenditures from 55 to 13; consumption expenditures from 49 to 15; and non-consumption expenditures from 9 to 5.For a few items, that were of special interest (education, health care, kerosene), because of recent or proposed changes in government policies that affect their price, detailed disaggregated questions remained.

6 The same reference periods were used, however, in the shortened and standard modules, to allow for a clean comparison of any differences resulting from changes in the list of items.

7 The aim of both these experimental consumption modules was to reduce the time taken in canvassing the consumption data, which will in turn also reduce the respondent fatigue and thus improve quality.

METHOD OF CANVASSING

8 The standard consumption modules and the experimental consumption module based on the point-of-purchase approach on the same household in the same interview, is not likely to have any effect on the reliability of either set of figures. It was therefore decided to canvass the point-of-purchase consumption module on half of the households covered by the standard consumption modules, that is, 1,248 dwellings out of the total sample of 2,496 dwellings.

9 The shortened item-by-item consumption module, however, was canvassed on a different sample of households than the one canvassed with standard consumption modules, because it was derived from the same pattern of commodity groupings as the standard modules though with further aggregation of the items. The two modules, if canvassed on the same households, would influence the reported consumption figures. The sample for canvassing this module was 1,248 dwellings, selected at the rate of 8 dwellings from each of the 156 Enumeration Districts (EDs) covered by SLC 94. These were the dwellings of the two panels covered in the July Labour Force Survey (LFS), but replaced in the October 1994 LFS.

10 Thus, two questionnaire were canvassed in SLC 94: one which contained all the standard modules and the point-of-purchase module and the other which contained the shortened item-by-item consumption module, which was canvassed on a different sample of 8 dwellings each in the 156 sampled EDs. The questionnaire which contained the standard modules and point-of-purchase module was divided into the following 14 parts, apart from the Cover:

Part A: General Health of all household members

Part B: Education of all household members of age 3 years and older

Part C: Anthropometric measurements and immunization data for all children 0-59 months old

Part D: Social Mobility (to be canvassed on all household members of age 16 years and over)

Part E: Daily Expenses (past 7 days)

Part F: Food Expenses including home production and food received as gift (past 7 days and past 30 days)

Part G: Non-food Consumption Expenditures (past 30 days and in most cases past 12 months)

Part H: Non-Consumption Expenditures such as insurance, gifts, and donations etc.,(past 30 days and past 12 months)

Part I: Receipt of Food Stamps and reasons for not receiving

Part J: Housing Conditions and Related Expenses

Part K: Inventory of Durable Goods owned by the household

Part L: Miscellaneous Income received by the household

Part M: Consumption Expenditure by Point of Purchase

Part R: Household Roster of all members

11 The periods given in brackets against parts D to H are the reference periods adopted for collecting the expenditure data. In SLC 94, the following changes were made in the standard modules compared with SLC 93:

Part B: Education- Two new questions (Q13 and Q14) were added on page B2 of the module to collect information on the costs incurred by the household on education of the children, for providing basic information to the Ministry of Education to assist in the formulation and monitoring of their scheme for sharing education costs of secondary education. Information on costs covering all children attending school, was collected in Q13, while Q14 is specifically designed for those attending secondary schools.

12 The second questionnaire, which was canvassed on a different sample, called the "Shortened Item by Item Consumption Modules", contained, besides the cover, only the shortened versions of Parts E, F, G, H mentioned above and the Roster.

II. Sampling design

13 The sample dwellings for the November 1994 round of SLC was a sub-set of the October 1994 Labour Force Survey (LFS).

14 The design adopted for the LFS (all surveys of STATIN follow the same design) was a two-stage stratified random sampling design. The first stage is a selection of areas (Enumeration Districts of Population Census) and the second stage is a selection of dwellings. For the selection of the first stage units, that is, the Enumeration Districts, all the EDs in the country were grouped into strata (also called sampling regions) of equal size, in terms of

dwellings. Two ED were selected from each stratum with probability proportionate to size. In each selected ED, a list of all dwellings is prepared by the field interviewers by house to house visits, which formed the frame for selection of a sample of dwellings for LFS.

15 The sample dwellings for the LFS are revised once in 4-5 years by selecting a new sample of two EDs from each stratum and preparing updated lists of dwellings in each; the strata are then updated, on the basis of available information on new dwellings. Updated and comprehensive data on dwellings are generally available only after the results of a population census and, therefore, in between the censuses, whatever revisions are made to the LFS sample, are mostly through the selection of a new sample of EDs and preparation of updated lists of dwellings in the selected EDs.

16 The sample dwellings for LFS in 1988 and the corresponding SLC 88 were those selected in 1983 with strata formed on the basis of 1982 population census; the sample was revised in 1989, which was adopted for all quarterly Labour Force Surveys and the Surveys on Living Conditions conducted during 1989 to 1992. In 1993, the sample dwellings for the LFS were again revised. This follows the revision of the strata based on the dwellings data collected in the population census 1991 and this sample was adopted for the LFS and SLC surveys in 1993, onwards.

17 For the revision of LFS sample in 1989, the country was divided into 217 strata (or sampling regions) of equal size (the prescribed size was 2,400 dwellings per stratum); and for the revision in 1993, the country was divided, into 234 strata each containing about 2,500 dwellings. In the 1989 revision, 36 dwellings were selected from each selected ED while in 1993, this number was reduced to 32 dwellings, to keep the overall sample of dwellings at a manageable level. The 36 dwellings selected from an ED in 1989 were grouped into 12 panels of 3 each and 6 of these panels were covered in each round of LFS, with replacement of 3 panels from round to round; while in the revision of 1993, the 32 dwellings selected from each selected ED were grouped into 8 panels of 4 each and 4 of these panels were covered in each round of LFS. Thus, the LFS surveys conducted during 1989 to 1992 covered in each round 7,812 dwellings selected from 434 EDs which themselves were selected at the rate of 2 each from 217 strata or sampling regions. On the other hand, the LFS surveys of 1993 and 1994 covered 7,488 dwellings drawn from 468 EDs, which were selected from 234 sampling regions.

III. SLC Sample

18 The sample dwellings for the SLC were selected as a random sub-set of the sample for the immediately preceding LFS, to facilitate the linkage of the data collected in both surveys for an integrated analysis. Thus, one third of the LFS sample dwellings were covered in SLC 88, SLC 89-1, SLC 90, SLC 91 and SLC 93; and two thirds of the LFS sample dwellings in SLC 89-2; and in SLC 92, all LFS samples in ten parishes and two thirds of the samples in Kingston, St. Andrew, Clarendon and St. Catherine were covered, to provide parish estimates.

19 In the LFS conducted in October 1994, the sample comprised 468 EDs, drawn from 234 strata (also called sampling regions), with 16 dwellings selected from each ED - a total of 7,488. For the SLC 94, conducted in November 1994, 78 strata (selected on a circular systematic sampling basis from the 234 strata), along with the 2 EDs and 32 dwellings from each stratum covered in the October LFS were included in the SLC sample. Thus, the sample for SLC 94 covered 2,496 dwellings. The sample dwellings were repeated in LFS once a year; and, therefore, the sample dwellings of SLC 94 are the same as in SLC 93, though there may be some changes in the households because they might have moved out of the selected dwelling over the year.

20 In this context, it may be noted that since the sample of 78 strata was selected from all the 234 strata in the country in SLC 93 and SLC 94,

unlike in some of the previous rounds, when the sample strata were selected separately from each parish it gave rise to rounding off errors in the parish proportions. Thus, no weighting at the parish level to take account of the differences in sampling fractions, will be necessary in SLC 93 and SLC 94.

21 As mentioned in paragraph 17, the SLC 94 and the corresponding October LFS covered 4 of the 8 panels of 4 dwellings each, in each selected ED, from the master sample. Of the 4 panels labelled E, F, G, and H , E and F were continuing from the July LFS, while G and H were the new panels. The point of purchase module was canvassed on the 8 dwellings in panels E and G.

22 For simplicity in printing, however, the experimental point-of-purchase module was included in all questionnaires with the standard modules; on the cover page of the questionnaire, it was indicated whether the dwelling should be canvassed or not for the point-of-purchase module.

23 The standard and the experimental point-of-purchase modules were administered in a different order on different households. The reason for this was that since they cover similar information, the respondents' answers to the second set of modules might be influenced by having answered earlier the first set of modules. The effect of this can be studied if the modules are canvassed in a different order in a pre-determined fashion. The two different orders in which the modules were administered are discussed in greater detail in Appendix III. The order was specified on the upper right hand corner of the cover page.

IV. Investigations

24 The Interview method was followed in conducting the SLC, that is, the Interviewers of STATIN visited the households in the selected dwellings and recorded the information which was elicited by oral enquiry. All surveys conducted by STATIN follow the same method of investigations. There are several advantages in the interview method. In this method, the interviewer can be trained intensively in the concepts, definitions and details of classifications so that a high degree of consistency in the replies can be obtained. Since the interviewers make personal visits and contact the households, non-response can be reduced to a minimum. The use of interviewers also makes it possible to employ a variety of techniques to maintain the interest of the respondent and increase the reliability and completeness of the data collected.

25 The main disadvantage of the interview method, however, is that the data collected, especially on topics such as consumption expenditure, are largely based on the recollection of the respondent; but experience has shown that the alternative which is to ask the respondent to complete the questionnaire has disadvantages as well. Many of the households are neither capable of keeping nor willing to keep accounts, nor to follow adequately the concepts, definitions and instructions.

26 There was a delay of about two and a half months in completing the field work under SLC 93. In order to reduce this delay, an incentive scheme was introduced in SLC 94. The investigations commenced by the middle of November and the cut-off date was prescribed as January 15. All the questionnaires received in STATIN on or before the cut-off date were paid at the following rates:

Completed Questionnaire

	I$
Senior Supervisor	10
Supervisor	25
Interviewer	75

Anthropometric Measurements

Supervisor	75
Interviewer (who assisted)	25
Child (payment in kind)	25

28 It was made clear that only those questionnaires received on or before the cut-off date and which were accepted for analysis would be eligible

for the incentive. This had a salutary effect, and 1,939 completed questionnaires and anthropometric data on 778 children were received by the cut-off date. These accounted for almost all those finally analysed.

29 No separate incentive was given for completing the second questionnaire, that is, the shortened item-by-item consumption modules. While determining the amount of incentive to be paid for the completed questionnaires in an ED, the receipt of the second questionnaires was also kept in view.

Supervision

30 Apart from the intensive training given to the interviewers and supervisors before the start of the investigations, the SLC statistician and consultant visited all the supervisors' zones during the early part of the field work. A few questionnaires of each interviewer were scrutinised and on-the-job training was provided, where necessary.

V. Non-response

31 In SLC 94, it was observed that the non-completion of standard questionnaires was about 22.0 per cent against 20.5 per cent in SLC 93, 28.1 per cent in SLC 92 and 29.8 per cent in SLC 91. Another 0.3 per cent of the questionnaires were rejected for analysis at the time of data cleaning, because of inconsistent data against 1.1 per cent in SLC 93, 1.6 per cent in SLC 92 and 1.3 per cent in SLC 91. The following shows the non-interview rates in SLC 90 to SLC 94.

32 In this context, it may be relevant to observe that 79 dwellings in Kingston and St. Andrew in two supervisors' zones could not be visited by the interviewers due to violent activities at the time of the survey. These were distributed over a few EDs and no ED was completely affected. In one supervisor's zone, out of 7 EDs with 112 sample dwellings in Kingston West, South-West and East-Central, 40 were not contacted, 18 were reported as vacant or closed and 15 as refusals. If these 79 dwellings, which formed 3.2 per cent of the total sample, were not considered, the non-interview in SLC 94 would be only 18.8 per cent against 20.5 per cent in SLC 93; thus the response rate which was much better in SLC 93, further improved in SLC 94.

33 The total number of questionnaires accepted for analysis in SLC 94 was 1940 against 1963 in SLC 93, or a shortfall of only 23. This compares with 79 dwellings not contacted due to violent activities, indicating that there were more intensive enquiries elsewhere, presumably because of the incentive scheme. The non-completion of questionnaires due to the households' refusal to furnish information was 6.9 per cent in SLC 94 compared with 8.4 per cent in SLC 93, 8.8 per cent in SLC 92 and 10.4 per cent in SLC 91. Thus, there was a decrease in refusals in SLC 94.

34 The non-response rates for the two experimental consumption modules were slightly higher than the rates for the standard questionnaire, as shown below.

TABLE APPENDIX I.2
PLANNED AND FINAL SAMPLE SIZES, SLC 90 TO SLC 94

Year	Sample Size		Non-Response Rates (%) Non-interview			
	Planned	Analysed	Dwelling Vacant/ Closed	Refusals	Rejected in Data Cleaning	Total
90	2,592	1,828	18.0	9.7	2.0	29.7
91	2,592	1,786	19.4	10.4	1.3	31.1
92	6,237	4,485	19.3	8.8	1.6	29.7
93	2,496	1,963	12.1	8.4	1.1	21.6
94	2,496	1.940	15.1	6.9	0.3	22.3

TABLE APPENDIX I.3
SAMPLE SIZE PLANNED AND ANALYSED FOR THE EXPERIMENTAL CONSUMPTION MODULES

Survey	Sample Size		Non-Response Rate (%) including Rejected in Data Cleaning
	Planned	Analysed	
Point-of-Purchase Module	1,248	941	24.6
Shortened Item by Item Questionnaire	1,248	936	25.0
Standard Questionnaire	2,496	1,940	22.3

VI. Adjustment for non-response

35 The sample assigned to the LFS (also SLC) is designed in such a manner that it is self-weighting and each dwelling in the sampling universe is given an equal probability of being represented in the sample. For such a sample, the estimates can be built up by pooling the results of all households straightaway without assigning weights at any stage. But, since there were some non-interviews and they were found to be uneven across geographic areas, the self-weighting nature of the sample would be affected, unless adjustment factors were applied for non-interviews. Since SLC 90 these adjustment factors (also called raising factors) were applied at the Enumeration District level to correct for non-response at that level. The raising factor for an ED is the total number of dwellings assigned under the self-weighting design divided by the number of dwellings for which data are finally accepted for analysis. The implicit assumption is that the non-responding dwellings/households will have similar features as the responding. Since an ED is a small geographic area, this assumption is not unreasonable.

36 The application of the non-response adjustment factors at the ED level is equivalent to the application of the same factor to all household observations within the ED. Hence, the non-response adjustment factor (also called the raising factor), relevant to each household, is included in the Statistical Analysis Software data set, for use by those involved in data processing.

37 The non-response adjustment factors were applied in generating all the aggregates involving the pooling of information from all households of an ED or group of EDs, such as estimates for parishes, regions, and Jamaica. In the case of aggregates which cut across EDs, such as the distributions by population deciles and quintiles, the non-response adjustment factors cannot be conceptualised and, therefore, cannot be applied.

VII. Data entry/cleaning

38 Before data entry, all the questionnaires were edited and coded. All clerical errors were removed at this stage. All questionnaires which were partly completed or not filled out at all were removed from data entry operations. After screening of the questionnaires by the assistants, all the questionnaires were once again scrutinised by the SLC statisticians and consultant, for any inconsistencies.

39 The data entry was done on Personal Computers and adequate computer checks for ensuring consistency in totals, codes, etc, which are feasible at this stage were introduced in the data entry programme. The computer printouts of the data in respect of all households were compared with the questionnaires to spot data entry errors, first by the assistants and then by the SLC statisticians and consultant.

40 Immediately after the data were entered and the data sets were formed, checks for area classification, that is, Kingston Metropolitan Area,

Other Towns and Rural Areas were undertaken through a computer programme, for both questionnaires.

41 Then, the consumption expenditure data collected in Parts E to H were annualised. The method followed is described in Appendix II. At this stage, four indicators were adopted for cleaning the data collected in the standard modules, namely, (i) per capita annual household consumption expenditure; (ii) the percentage expenditure on the Food group; (iii) the percentage expenditure on Meals taken away from home; and (iv) the percentage expenditure on Housing. These indicator values were calculated for all households along with the corresponding mean and standard deviation for these four variables. This operation was done for households falling into each of the five per capita consumption expenditure quintiles formed on the basis of indicator (i), for ensuring adequate dispersal of the cleaning process. The indicators selected and the method followed

for cleaning the data collected in the two experimental consumption modules is described in Appendix III.

42 In each quintile, the questionnaires of households which fell beyond the range "mean plus or minus two standard deviations" for any of the four indicators were taken for detailed scrutiny. Out of 1,947 household questionnaires included in the data set, 138 questionnaires were thus taken for detailed examination. Out of these, 7 questionnaires with abnormal or inconsistent data which could not be removed at the editing stage were rejected; 15 questionnaires with clerical errors were corrected; and the remaining 116 questionnaires were accepted. The corresponding figures for the two experimental consumption modules are given in Appendix III.

43 Thus, against 1,947 questionnaires included in the data set, 1,940 household questionnaires were considered in the final processing- 605 from the Kingston Metropolitan Area (KMA); 390 from Other Towns; and 945 from Rural Areas.

VIII. Distribution of Households with Females as Head

44 Two tables (Table A-8 and Table A-9) present the distribution of households with females as head according to "no man, no child"; "no man, with children"; "with man, no child" and "with man, with children". In these tables, man is taken to mean the spouse of the female head who is a member of the household. This concept was used in SLC 93 and SLC 92 also.

IX. Measurement of Malnutrition

45 Standards set by the World Health Organisation were used to measure malnutrition. "Normal weight for height" is defined as more than 80 per cent of the median weight for height. Severe wasting is defined as weight for height less than 70 per cent of the median. Moderate wasting is weight for height between 70 and 80 per cent of the median. Normal height for age is 90 per cent of the median or above. Moderate stunting is height for age from 85 per cent to 90 per cent of the median. Extremely low weight for age is less than 60 per cent of the median. Moderate low weight for age is 60 to 80 per cent of the median. Normal weight for age is 80 per cent of the median or greater.

46 The median weight for height, height for age and weight for age referred to above relate to a reference population accepted by WHO for international comparisons. The criteria adopted for this purpose are described in Annex 3 of the publication "Measuring Change in Nutritional Status" issued by the WHO.

49 The field supervisors of STATIN measured the standing height of children aged over two years, and length (lying down) in younger children using a measuring board. The anthropometric measurements on about 90 per cent of the children of age 0-59 months in the sample households, were accepted for analysis in SLC 94.

APPENDIX II

SOME TECHNICAL ASPECTS

I. Construction of an annualised consumption data set

1 Data on household expenditures were collected in Parts E to I. Part H relates to specified non-consumption expenditure, Part I to housing and utilities and the rest to food and non-food commodity consumption and services. The expenditures were collected for the various items with different reference periods depending on their frequency of purchase, etc.

2 To arrive at a total consumption expenditure figure, the consumption data in each part were annualised and a sum made of the different parts. However, since several parts ask about consumption expenditure for two different periods of time, one of the two time periods must be selected, or an average of the two.

3 Different time periods are affected by different problems. The short reference period may be affected by catching expenditures of the previous period; it may be that the item was not purchased in that period. On the other hand, the long period may be affected by the respondent's "recall lapse", that is, the respondent not being able to recall all the purchases in that period.

4 The method followed so far in all the rounds of SLC for annualising the consumption expenditure is to take an average of both the short and long reference periods. This tends to smooth out possible distortions by choosing a middle ground between the two time periods. Technically, the portion of the long term expenditure that does not include the short term expenditure (e.g. the 11 months previous to the last month if the long period is one year and the short period is one month) was calculated and then annualised, and an equal weighted average of this annualisation and the short period annualisation was taken. For all items for which only one time period is used, the consumption figure is annualised by straight forward multiplication (i.e. 7 days figures multiplied by 365/7, and 30 days figures multiplied by 365/30).

5 The following paragraphs describe the procedures followed in annualising the expenditure and grouping the data by commodity groups and sub-groups.

Single quotation

6 For all items for which only one reference period is prescribed or for which the expenditure was reported for one of the two reference periods, the annualisation of expenditure on that item is simple - the reported figure was multiplied by 365/p, where 'p' stands for the period for which the expenditure was reported. In the case of two reference periods, the following procedure was followed:

Notation

st - short period expenditure; sp- short period (days);
lt- long period expenditure; lp- long period (days);
'.'- data missing.

Formulae

if st=. and lt=. then value= 0;
else if st=. then value=lt*365/lp;
else if lt=. then value=st*365/sp;
else if lt< = st then value =st*365/lp;
else value=[0.5*st+0.5*(lt-st)/(lp-sp)/sp]*365/sp.

Missing values

7 When the household had not spent any amount on a specified item in parts E to G, the interviewer would answer the relevant lead question on whether the household purchased or received as gift or consumed home grown (in case of food) with a "no"; and skipped the relevant space provided for the amount. Hence, all blank spaces in Parts E to G should not be treated as missing values. When the household was unable to provide the amount for an item, then "N.S" (not stated) was written in that space. Such cases where the respondent was unable to provide amount to only some items were found to be rare. STATIN does not, therefore, impute values in such cases.

Monetary values

8 Unlike in SLC 91-93, in the Statistical Analysis

TABLE APPENDIX II.1
NATIONAL AND REGIONAL MONTHLY PRICE INDICES
JANUARY 1994 TO MARCH 1995
(BASE: JANUARY 1988 = 100)

Year/Month	Jamaica	KMA	Other Towns	Rural Areas
			(All Commodity Index)	
1994				
January	558.9	549.4	560.9	570.1
February	578.0	568.6	578.9	589.6
March	590.4	580.8	589.2	603.8
April	601.6	591.7	600.2	615.5
May	616.1	606.0	613.3	631.0
June	629.8	617.9	627.4	646.7
July	650.5	637.9	650.3	667.0
August	666.4	656.9	664.3	680.1
September	673.5	664.9	671.2	686.2
October	682.5	673.4	679.7	696.1
November	687.3	676.7	683.5	703.4
December	692.3	681.7	688.6	708.4
1995				
January	701.2	690.8	695.8	718.0
February	709.2	696.6	703.2	729.4
March	715.8	701.8	709.6	737.8
			(Food and Drink Group index)	
1994				
January	607.9	608.2	604.3	609.6
February	632.5	633.8	629.1	632.9
March	649.1	649.7	643.3	651.6
April	664.5	666.2	657.3	666.6
May	685.2	688.0	676.2	687.1
June	704.4	704.4	697.3	708.4
July	724.8	720.5	719.5	732.2
August	737.1	736.4	730.7	741.3
September	741.1	739.9	737.1	744.6
October	747.3	747.7	740.3	750.8
November	752.4	750.0	743.9	759.6
December	757.6	754.9	751.2	763.9
1995				
January	767.9	765.6	758.5	775.7
February	777.9	773.9	765.0	789.4
March	786.2	782.2	771.9	798.5

Software (SAS) data set, the dollars and cents in consumption and non-consumption expenditure modules were treated as one numeric variable.

Deflators

9 The expenditure aggregates compiled from the survey were at current prices. Quite often the estimates were required to be deflated to the price levels in one of the previous years, to make valid comparisons on the basis of constant price series. In the reports on SLC, STATIN/PIOJ presents the consumption aggregates at constant prices also, to assess the real trends in consumption. The monthly consumer price indices compiled by STATIN are used as deflators for this purpose. These indices are compiled for Jamaica and the three major area divisions, namely, KMA, Other Towns and Rural Areas, which are identical with the regions adopted for SLC consumption aggregates. The STATIN publications show the indices for all major groups of commodities, together with an all-group index.

10 In the chapter on Consumption in this report, STATIN/PIOJ used a simple arithmetic average of the October to December 1994 indices for deflation of SLC 94 expenditure aggregates. The indices for the food and drink group and the all-group indices for January 1994 to March 1995 are given in the Table Appendix II.1, for ready reference.

Commodity Groups and Sub-Groups

11 The annual household consumption was grouped under 11 Commodity Groups and 11 sub-groups under food. Both the groups and the sub-groups, broadly correspond to the grouping in the Consumer Price Indices. The codes of items included in each commodity group and sub-group in SLC 94 are shown in Table Appendix II.2. As mentioned in Appendix I, there was a change in the order of canvassing the expenditure modules in SLC 94, with the Food expenses module coming immediately after the daily expenses module followed by non-food consumption expenditure module and

TABLE APPENDIX II.2
ITEMS INCLUDED IN COMMODITY GROUPS AND SUB-GROUPS
SLC 94

Group/Sub-group		Item Codes
Commodity Groups		
1	Food and Beverages	(Given below)
2	Fuel and Household supplies	102 to 105; 304 to 308,312
3	Housing and Household Operational Expenses	309 to 311 + (rent+ utilities+mortgage+p.tax)
4	Household Durable Goods	313 to 321
5	Personal Care	301 to 303
6	Health Care	322 to 324
7	Clothing and Footwear	325 to 332
8	Transportation	338 to 344
9	Education	333, 335
10	Recreation	336, 337, 345, 346
11	Miscellaneous consumption	106; 334, 347 to 349;
Sub-groups (Under Food)		
1	Meat, Poultry and Fish	201 to 213
2	Dairy Products	214 to 221
3	Oils and Fats	222
4	Cereals and Cereal Products	223 to 225, 227 to 231
5	Starchy Roots and Tubers	232 to 235, 226
6	Vegetables	236 to 238
7	Fruits	239 to 241
8	Sugar/Sweets	242, 243
9	Miscellaneous Food	244 to 252
10	Beverages	253 to 255
11	Meals Away From Home	101

TABLE APPENDIX II.3
CONTENTS OF SAS DATA SET "ANNUAL"
SLC 94

Variable Name	Description
1 SERIAL	Household Identification
2 T_MEAL	Annual Purchased Meal Expenditure
3 T_NONCON	Annual Non-Consumption Expenditure
4 TOT_TAX	Annual Property Tax Payment
5 TOT_WAT	Annual Water Bill
6 ELECTRIC	Annual Electricity Bill
7 TOT_TELE	Annual Telephone Bill
8 TOT_MORT	Annual Mortgage Payment
9 UTILITY	Annual Utility Bill (TOT_WAT+ELECTRIC+ TOT_TELE)
10 RENT	Annual Rent Expenditure
11 HOUSING	Annual Housing Expenditure (RENT+TOT_MORT+TOT_TAX+UTILITY+ HOUSE HOLD OPERATIONAL EXPENSES)
12 RFACTOR	Raising factor (Non-Response Adjustment Factor)
13 PARISH	Parish Number
14 CONST	Constituency Number
15 DISTRICT	Enumeration District Number
16 DWELLING	Dwelling Number
17 HH	Household Number in Dwelling
18 HHSIZE1	Household Size- All Individuals
19 HHSIZE2	Household Size- Members only
20 POPDEC	Per Capita Population Decile
21 POPQUINT	Per Capita Population Quintile
22 HOMEGIFT	Annual Value of Home Produced and Gift Food
23 TCGIFT	Annual value of Gifts of Non-Food Consump.
24 TOTGIFT	Annual value of gifts of Food and Non-Food Consumption
25 NON_FOOD	Annual Non-Food Expenditure (Purchased+ TCGIFT+HOUSING)
26 TOT_FOOD	Annual Food Expenditure (Purchased+HOMEGIFT)
27 CONS	Annual Consumption Expenditure (TOT_FOOD+NON_FOOD)
28 PERCAP2	Per Capita Annual Consumption (Members only)
29 T_NONCON	Annual Non-Consumption Expenditure
30 TOT_EXP	Annual Expenditure (CONS+T_NONCON)

last the non-consumption expenditure module. Because of these changes in the order of canvassing the modules, the item codes have also undergone changes.

II. Annualised Expenditure Data Set

12 The annualised expenditure data from SLC 94 was given in SAS data set ANNUAL, as in previous rounds. Table Appendix II.3 gives the list of variables with a brief description of each variable.

III. Identification Variables

13 The identification variables, namely, PARISH, CONSTITUENCY, ENUMERATION DISTRICT NUMBER, AREA (i.e KMA, Other Towns and Rural Areas), DWELLING NUMBER, HOUSEHOLD NUMBER IN DWELLING, RFACTOR (weight for non-response at ED level), were given both in the SAS dataset ANNUAL and Data set REC001 (See Appendix II.4). These identification variables will be used to link SLC and LFS.

IV. SAS Data Sets

14 SAS data sets were created generally one for each page of the questionnaire, except in the case of Food expenditure (Part F) and Consumption expenditure (Part G) where one data set was created for the entire part, because of the similarity of the questions for all items. In the case of food stamps programme, though it was covered in one page in the questionnaire, two data sets were created - one for the persons receiving food stamps and the other for persons who applied for food stamps. The way to link data sets within the SLC is through

TABLE APPENDIX II.4
LIST OF DATA SETS IN SLC 94

Standard Modules			
REC001	SSD	Cover	
REC002	SSD	Part A -	Health 1
REC003	SSD	Part A -	Health 2
REC004	SSD	Part A -	Health 3
REC005	SSD	Part B -	Education 1
REC006	SSD	Part B -	Education 2
REC007	SSD	Part C -	Anthropometric Measurements
REC008	SSD	Part D -	Social Mobility
REC009	SSD	Part E -	Time Information - Start and End
REC009_2	SSD	Part E -	Time Information - Corrected
REC010	SSD	Part E -	Daily Expenses
REC011	SSD	Part F -	Respondent
REC012	SSD	Part F -	Food Expenses - Purchased
REC013	SSD	Part F -	Food Expenses - Home Production/Gifts
REC014	SSD	Part G -	Respondent
REC015	SSD	Part G -	Consumption Expenditure
REC016	SSD	Part H -	Non-consumption Expenditure
REC017	SSD	Part I -	Food Stamps
REC018	SSD	Part I -	Food Stamps - Recipients
REC019	SSD	Part I -	Food Stamps - Applied-Not Receiving
REC020	SSD	Part J -	Housing Expenses
REC021	SSD	Part K -	Time Information - Start and End
REC022	SSD	Part K -	Durable Goods - Inventory
REC023	SSD	Part K -	Durable Goods - Acquisition Value
REC024	SSD	Part L -	Miscellaneous Income
REC030	SSD	Roster -	Principal Earner
REC031	SSD	Roster -	Age, Sex, and other details of members
THOMFOOD	SSD	Total Annual Home Produced Food	
THOUSEXP	SSD	Total Annual Household Operational Expenses	
TOTMEALS	SSD	Total Annual Expenditure on Meals Away From Home	
ANNUAL	**SSD**	**Total Annual Consumption Expenditure**	
Point-Of-Purchase Modules			
REC025	SSD	Time Information - Start and End	
REC025_2	SSD	Time Information - Start and End Corrected	
REC026	SSD	Part M1 -	Consumption Expenditure
REC027	SSD	Part M2 -	Expenditure on Cooking Gas
REC028	SSD	Part M3 -	Consumption Expenditure
REC02[illegible]	SSD	Part M4 -	Consumption Expenditure
ANN2[illegible]	SSD	Part M1 -	Total Annual Consumption Expenditure
ANN2[illegible]	SSD	Part M2 -	Total Annual Expenditure on Cooking Gas
ANN2[illegible]	SSD	Part M3 -	Total Annual Consumption Expenditure
ANN2[illegible]	SSD	Part M4 -	Total Annual Consumption Expenditure
ANNUA[illegible]	**SSD**	**Total Annual Consumption Expenditure**	
Shortened Item-by-Item Consumption Modules			
REC001_	S SSD	Cover	
REC002_	S SSD	Part E -	Time Information - Start and End
REC003_	S SSD	Part E -	Daily Expenses
REC004_	S SSD	Part F -	Respondent
REC005_	S SSD	Part F -	Food Expenses - Purchased
REC006_	S SSD	Part F -	Food Expenses - Home Production/Gifts
REC007_	S SSD	Part G -	Respondent
REC008_	S SSD	Part G -	Consumption Expenditure(Items 301-310)
REC009_	S SSD	Part G -	Respondent
REC010_	S SSD	Part G -	Consumption Expenditure(Items 311-315)
REC011_	S SSD	Part H -	Non-consumption Expenditure
REC012_	S SSD	Roster -	Principal Earner
REC013_	S SSD	Roster -	Age, Sex, and other details of members
THFOOD_	S SSD	Total Annual Home Produced Food	
THSEXP_	S SSD	Total Annual Household Operational Expenses	
TMEALS_	S SSD	Total Annual Expenditure on Meals Away From Home	
ANNUAL_	S SSD	Total Annual Consumption Expenditure	

the four-digit serial number of the household, whose variable name is SERIAL. Table Appendix II.4 shows the list of data sets prepared for the standard modules and the two experimental consumption modules.

V. Tabulation Programme

15 A standard tabulation programme was developed for the basic modules on the different sectors. This programme was improved by the SLC Steering Committee while generating tables from the fourth round of SLC, conducted in November 1990. The tabulations from the fifth round of SLC conducted in November 1991, followed this improved programme. Some of these tables were generated at STATIN; some at PIOJ; and a few at the ministries. The tabulation programme was further improved in SLC 92; and included a number of parish tables. The Parish tables, however, were not generated in SLC 93 or SLC 94, as the sample size was relatively small.

VI. Estimation

16 The estimation of aggregates from SLC 94 is staightforward, as in SLC 93.

Deciles/quintiles

17 The deciles and quintiles are formed of sample household members after arranging them in ascending order of their per capita household consumption. The per capita household consumption is arrived at by dividing the total household consumption by the number of household members. All members of the household are assumed to have the same per capita consumption. The decile classification of households is shown in the SAS data set with label ANNUAL. Quintile 1 comprises Deciles 1 & 2; quintile 2 comprises Deciles 3 & 4; and so on.

18 It should be noted that no household was ignored in the analysis of variables according to deciles or quintiles. It should also be understood that the deciles and quintiles comprise equal numbers of household members and not households.

VII. Sampling Errors

19 The sampling design adopted for the LFS and the SLC is a self weighting design, that is, the probability of selection of a second stage unit is the same for all units in the population, which in effect means a uniform sampling fraction for all strata (which are of equal size in terms of dwellings) with an equal number of second stage units being selected from the two first stage units. The sampling regions being of equal size coupled with the fact that the probability of selection of the second stage units was equal in all strata, had simplified the estimation formulae. Only in SLC 92, the sampling fractions being different for four parishes, compared with the other 10 parishes, necessitated the introduction of appropriate weights at the parish level. In SLC 93 and SLC 94, the sampling fraction being the same in all parishes, there was no necessity for any weighting except the weights (or raising factors) for non-response.

20 The formulae for estimation of sample mean and its variance are as follows:

Notation

Strata (Sampling Regions) from parish "t" included in the survey	Lt
Number of Sub-Units (dwellings) in Sampling Region	M (same for all regions)
Number of first stage units (EDs) selected from a sampling region	2 (same for all regions)
Number of second stage units (dwellings) selected from one selected ED	m (same for all EDs)
Number of dwellings analysed from "i"th selected ED in the "s"th	mis

sampling region

Non-response raising factor for the "i"th ED in the "s"th sampling region fis =m/mis

Unit Value for the 'j'th sub-unit in the 'i'th primary unit (ED) Yij

Sample Mean for the 'i'th selected ED in the 's'th region $\bar{Y}$is

then, in the case of parish estimates, the Sample Mean and variance of the sample mean for the "t" th parish are given by the following simple formulae-

$$Y = \frac{1}{Lt * 2m} \sum_{s=1}^{Lt} \sum_{i=1}^{2} \sum_{j=1}^{mis} fis * Yij$$

and the Variance of the Sample Mean (the square root of which is called the Standard Error) is given by the formula-

$$V(\bar{Y}) = \frac{1}{4Lt^2} \sum_{s=1}^{Lt} (\bar{Y}1s - \bar{Y}2s)^2$$

where $\sum$ stands for summation.

21 The above simple formulae are also applicable in case of all regional aggregates, where the region is built up of sampling regions from parishes with the same sampling fraction.

22 These relatively simple formulae are due to the sampling design involving paired selection of first stage units (i.e. EDs) with probability proportionate to size, from each sampling region.

VIII. Standard Errors

Estimates of Mean Per Capita Consumption

23 Based on the above formulae, the mean per capita consumption expenditure and its standard error were compiled for the three area divisions, namely, KMA, Other Towns and Rural Areas, from the SLC 94 and presented below, with comparative figures for SLC 93. In the case of a few sampling regions, one of the two EDs belonged to Other Towns and the other to Rural Areas; in such cases, the sampling region as a whole is treated as belonging to Rural Areas, for purposes of compiling the variance of the sample mean.

24 The standard errors were compiled for the mean per capita consumption estimates at current prices. More often, what would be required is to test the difference in the estimates of mean per capita consumption at constant prices between surveys. Usually, the deflator, based on the consumer price indices, is applied to the aggregate estimate of mean per capita consumption, to arrive at the mean consumption estimate at constant prices. The above percentage standard errors, could, however, be applied to the constant price estimates, on the assumption that the same deflator could be applied to the household level consumption. If the standard

TABLE APPPENDIX II.5-(I)
NUMBER IN SAMPLE, MEAN AND STANDARD ERROR OF ESTIMATES OF PER CAPITA CONSUMPTION, BY REGIONS, SLC 93 AND SLC 94

Area	SLC 93			SLC 94		
	Sample (House holds)	Mean Cons ($)	Standard Error %	Sample (House holds)	Mean Cons ($)	Standard Error %
KMA	647	30,766	4.4	605	46,127	4.5
Other Towns	384	23,523	6.3	391	32,406	6.4
Rural Areas	932	18,517	3.6	944	24,296	3.6
Jamaica	1,963	23,408	2.7	1,940	32,712	2.8

errors are dealt in the measuring units (such as $), then the current price estimate of standard error has to be divided by the deflator.

Caution

25 When the sample size is small, it is not worthwhile to compile standard errors for all the detailed breakdowns, as they are likely to be relatively large and of limited use. For instance, the standard errors of the regional estimates of mean per capita consumption given above, though useful in giving an idea of the magnitude of the sampling error, is not found useful in testing the difference in mean consumption in two successive surveys. The standard errors are large and the standard error of the difference would be even larger. The result would be that, even large observed differences in estimates of mean consumption in two surveys would be within the confidence limits, for accepting the null hypothesis that there is no real difference in the means in the population. For this reason, in the following paragraphs, only the standard errors of some estimates for the country as a whole are presented for a few more variables.

Mean Household Composition

26 Table Appendix II.5-(ii) presents the standard errors of the estimates of mean household size, number of adult males, adult females and children for the years 1990 to 1994.

IX. Tests of Significance

Difference in means of two samples

27 The broad principles in testing the means obtained from two samples are described below.

Hypothesis:

28 The hypothesis in testing for significance is

TABLE APPENDIX II.5-(ii)
NUMBER IN SAMPLE, MEAN AND STANDARD ERROR OF HOUSEHOLD SIZE, MEAN NUMBER OF ADULT MALES, ADULT FEMALES AND CHILDREN, IN JAMAICA, SLC 90 TO SLC 94

Variable	SLC 90	SLC 91	SLC 92	SLC 93	SLC 94
Sample Size (N=)	1,828	1,786	4,485	1,963	1,940
Household Size					
Mean (No.)	3.92	3.91	3.88	3.77	3.69
S.E	0.063	0.063	0.041	0.058	0.058
% S.E	1.61	1.61	1.06	1.54	1.57
Adult Males					
Mean (No.)	1.24	1.23	1.22	1.16	1.16
S.E	0.024	0.024	0.015	0.022	0.021
% S.E	1.94	1.95	1.23	1.90	1.81
Adult Females					
Mean (No.)	1.32	1.35	1.33	1.29	1.26
S.E	0.025	0.026	0.016	0.022	0.022
% S.E	1.89	1.93	1.20	1.71	1.75
Total Adults					
Mean (No.)	2.56	2.58	2.55	2.45	2.42
S.E	0.037	0.038	0.024	0.034	0.033
% S.E	1.45	1.47	0.94	1.39	1.36
No. of Children					
Mean (No.)	1.35	1.33	1.33	1.33	1.27
S. E	0.038	0.038	0.025	0.036	0.036
% S.E	2.81	2.86	1.88	2.71	2.83

S.E. - Standard Error

that there is no difference in the means of the populations from which the two samples were selected. If it is known that the standard deviations of the two populations are known to be equal, it will be a test whether these two samples came from the same population.

29 This hypothesis is also called the "null" hypothesis, that is the difference in the population means is zero, though there is some observed difference in the sample means.

Assumptions:

30 The assumptions involved in the test are that -

(i) The two samples are independent; and
(ii) The samples are large (i.e. more than 100 each)

Notation:

Item	Sample 1	Sample 2
Sample size	n_1	n_2
Sample mean	$\bar{x}_1$	$\bar{x}_2$
Sample standard deviation	S1	S2
Variance of the mean	$\frac{(S1)_2}{n_1}$	$\frac{(S2)_2}{n_2}$
Standard error of mean	$\sqrt{\frac{(S1)_2}{n_1}}$	$\sqrt{\frac{(S2)_2}{n_2}}$

Difference in sample means $x_1 - x_2$

Standard Error of difference (s.e. diff) $\sqrt{\frac{(S1)_2}{n_1} + \frac{(S2)_2}{n_2}}$

Z- statistic

$$Z = \frac{x_1 - x_2}{\text{(s. e. diff)}}$$

31 In large samples, the Z - statistic is distributed in the "normal distribution" with 0 mean and unit standard deviation. For this distribution, 95 per cent of the observations are within + or - 1.96 and 99 per cent between + or - 2.58. Any observed Z which is beyond these limits will make the hypothesis that there is no difference between the means suspect and, therefore, we reject the hypothesis. If the Z is between the limits specified, it only means that there is no evidence to justify the rejection of the hypothesis that there is no difference in the means in the two populations.

32 The standard error of the difference in means will be larger than either of the standard errors of the two sample means. Hence, if the sample sizes are small, the standard errors of the sample means will be relatively large and the Z- statistic will turn out to be proportionately smaller. For example, take the case of testing the difference in mean per capita consumption in Other Towns at constant prices in 1994 compared with 1993. The difference was 11.4 per cent (see Table 2.3). In spite of this large difference, the test does not show that it is statistically significant, as the Z- statistic was 1.23 which was less than the specified 1.96 at 95 per cent confidence limit. This is because the percentage standard errors of the sample means were 6.3 in 1993 and 6.4 in 1994 and the standard errors in measuring units were $478 and $422 respectively. The standard error of the difference was $638 while the observed difference in the sample means was $785 at constant 1990 prices. The samples from Other Towns were 384 households in 1993 and 391 in 1994, which gave rise to the above large standard errors for the estimates of mean consumption.

33 It is therefore desirable to carry out tests for the estimates for Jamaica as a whole, and that too, when the differences in the estimates from two years are fairly large. The following tables present some of the test results for Jamaica for some variables.

X. Linking with LFS

34 As mentioned earlier, the selection of SLC sample dwellings as a subset of the immediately preceding LFS facilitates a linkage of the data collected in both surveys for an integrated analysis.

However, it should be remembered that in the SLC a household questionnaire is canvassed, while in the LFS, a questionnaire is canvassed for each household member. The SLC, questionnaire, however, provides for such a linkage.

35 Firstly, the identification codes of parish, constituency, enumeration district (ED), dwelling number, and household number for the SLC samples, are identical with the corresponding LFS sample dwellings. In the LFS, all questionnaires completed for individuals in a household are given the same identification.

36 Secondly, the roster of household members in the SLC is filled with the data on household members collected in the identification section of LFS, namely, name of the individual, relationship

TABLE APPENDIX II.5 (iii)
RESULTS OF TESTS OF SIGNIFICANCE FOR JAMAICA
A. MEAN PER CAPITA CONSUMPTION

Year	Sample Size (N=)	Mean Cons. ($)	S.E %	S.E ($)	Difference in Means ($)	S.E ($)	Z Statistic
		Mean Per Capita Consumption at Constant 1990 prices					
1994	1940	7,652	2.8	207			
1993	1963	6,805	2.7	184	847	277	3.08
1993	1963	6,805	2.7	184			
1992	4485	6,586	2.0	132	219	226	0.97
1993	1963	6,805	2.7	184			
1990	1828	7,616	3.7	282	-811	337	2.41
1992	4485	6,586	2.0	132			
1991	1786	6,080	3.4	207	506	245	2.06
1991	1786	6,080	3.4	207			
1990	1828	7,616	3.7	282	-1,536	349	-4.40

TABLE APPENDIX II.5 (iv)
RESULTS OF TESTS OF SIGNIFICANCE FOR JAMAICA
b. HOUSEHOLD COMPOSITION

Year	Sample Size (N=)	Mean (Number)	S.E %	Difference in Means (No.)	S.E	Z- Statistic
			Household Size			
1990	1828	3.92	1.61	0.063		
1994	1940	3.69	1.57	0.058 -0.23	0.0856	-2.69
			Number of Adult Males			
1990	1828	1.24	1.94	0.024		
1994	1940	1.16	1.81	0.021 -0.08	0.0319	-2.51
			Number of Adult Females			
1990	1828	1.32	1.89	0.025		
1994	1940	1.26	1.75	0.022 -0.06	0.0333	-1.80
			Total Adults			
1990	1828	2.56	1.45	0.037		
1994	1940	2.42	1.36	0.033 -0.12	0.0496	-2.42
			Number of Children			
1990	1828	1.35	2.81	0.038		
1994	1940	1.27	2.83	0.036 -0.08	0.0523	-1.53

S.E. - Standard Error

to the head of the household, sex and age and individual member. In the SLC surveys, these details of household members are arranged in the same order of individual numbers; and the details are updated; members who left the household in the intervening period between LFS and SLC are given a code 2, those who are new members a code 3, and those continuing code 1. There will not be the LFS data for members with code 3 and no SLC data for members with code 2. The age and sex data will be helpful in cases where the individual numbers of both surveys do not seem to correspond.

XI. Parish/Area codes

37 The Parish and Area codes are given below for ready reference:

Parish	Code	Area	Code
Kingston	01	KMA	01
St. Andrew	02	Other Towns	02
St. Thomas	03	Rural Areas	03
Portland	04		

TABLE APPENDIX II.6
INDUSTRIAL AND OCCUPATIONAL CLASSIFICATIONS AT ONE DIGIT LEVEL (ADOPTED FOR LABOUR FORCE SURVEYS 1988 TO 1995)

Industrial Classification

One digit code	Description
0	Agriculture, Forestry and Fishing
1	Mining, Quarrying and Refining
2/3	Manufacture
4	Electricity, Gas and Water
5	Construction and Installation
6	Wholesale & Retail Trade, Hotels & Restaurants
7	Transport, Storage and Communications
8	Financing, Insurance, Real Estate & Business Services
9	Community, Social and Personal Services

Occupational Classification (88 to July 93):

One Digit Code	Description
1	Professional, Technical, Administrative
2	Executive, Managerial and Independent Occupations
3	Clerical and Sales Occupations
4	Self-Employed and Independent Occupations
5	Service Occupations
6/7/8	Craftsmen, Production Process and Operating Occupations
9	Unskilled Manual and General occupations

Occupational Classification (July 93 to date):

1	Legislators, Senior Officials and Managers
2	Professionals
3	Technicians and Associate Professionals
4	Clerks
5	Service Workers and Shop and Market Sales Workers
6	Skilled Agricultural and Fishery Workers
7	Craft and related Trades Workers
8	Plant and Machine Operators and Assemblers
9	Elementary Occupations

APPENDIX III

A BRIEF REPORT ON EXPERIMENTAL CONSUMPTION MODULES
I. THE DESIGN

INTRODUCTION

1.1 In SLC 94, conducted in November 1994, the focus was on testing two shortened versions of the household consumption expenditure modules, to find whether it is possible to collect reliable information on consumption which would require less interview time, than the standard consumption modules. The details of the survey design are given in Appendix I to the main report on SLC 94. The following is a description of the salient aspects of the experimental consumption modules.

POINT-OF-PURCHASE MODULE

1.2 The two alternate formulations of the shortened versions of consumption modules were designated as (i) point of purchase module; and (ii) the shortened item by item consumption module. The point of purchase module was designed to collect information from the household on the amount spent at different shops, rather than the item-wise expenditure, as it was felt that it would be easier for the respondent to recall the total amount spent at each shop. The module used was very similar to that used in the pilot test in 1991. The larger sample to be used in SLC 94 would allow for more accurate comparisons. A few improvements were also made in the wording of some of the questions. The questions on home production and gifts (included in the 1991 pre-test version of point-of-purchase module) were omitted here because they account for a relatively small proportion of total consumption. The data collected in the standard modules could be used for purposes of comparison of total consumption. The questions on housing expenses (given in the housing module) also were not repeated in the point- of-purchase module and remained as a part of the housing module.

SHORTENED ITEM-BY-ITEM CONSUMPTION MODULES

1.3 The shortened item-by-item consumption module was designed on the same pattern as the standard module, but with further condensing of the item groups. For instance, instead of investigating 14 items on different kinds of meat used in the standard consumption module, only three items were used in the shortened version, to describe all kinds of meat.

1.4 The main reasons in grouping the items were to produce groups meaningful to respondents and for easier comparisons to the standard modules. For a few items, that were of special interest, because of recent or proposed changes in government policies that affect their price (education, health care, and kerosene), detailed disaggregated questions remained. The total number of items in these modules was reduced from 119 in the standard module to 37 items as follows: daily expenditures from 6 to 4; food expenditure from 55 to 13; consumption expenditure from 49 to 15; and non-consumption expenditure from 9 to 5.

1.5 The same reference periods were, however, used in the shortened and standard modules, to

allow for a clean comparison of any differences resulting from changes in the list of items.

1.6 The aim of both these experimental consumption modules is to reduce the time taken in canvassing the consumption data, which will in turn also reduce the respondent fatigue and thus improve quality.

METHOD OF CANVASSING

1.7Canvassing the standard consumption modules and the experimental consumption module based on the point-of-purchase approach on the same household in the same interview, is not likely to have any effect on the reliability of either set of figures. Therefore, the point-of-purchase consumption module was canvassed on half of the households covered by the standard consumption modules, that is, 1,248 dwellings out of the total sample of 2,496 dwellings.

1.8 The SLC 94 and the corresponding October LFS covered 4 of the 8 panels of 4 dwellings each, in each selected ED, from the master sample. Out of the 4 panels labelled E, F, G, and H , E and F were continuing from the July LFS, while G and H were the new panels. The point of purchase module was canvassed on the 8 dwellings in panels E and G.

1.9 For simplicity in printing, however, the experimental point of purchase module was included in all questionnaires with the standard modules; on the cover page of the questionnaire, it was indicated whether or not the dwelling should be canvassed for point-of-purchase module.

1.10 The standard and experimental point-of-purchase modules were administered in a different order in different households. Since they covered similar information, the respondents' answers to the second set of modules might be influenced earlier answering the first set of modules. The effect of this could be studied if the modules were canvassed in a different order in a pre-determined fashion. The two different orders in which the modules were administered follow. The order was specified on the upper right hand corner of the cover page.

1.11 For all households in both panels E and G whose dwelling number ends in an even digit, the interview was conducted in the same order, (i.e. ORDER 1), that the modules appear in the questionnaire. For all households whose dwelling number ends in an odd digit, the interview was conducted in a different order (i.e. ORDER 2) from which they appeared in the questionnaire.

Canvassing Order for Point-of-Purchase Module

ORDER 1: For Households with Dwelling Number Ending in EVEN DIGIT	ORDER 2: For Households with Dwelling Number Ending in ODD DIGIT
Roster	Roster
Health (Part A)	Health (Part A)
Education (Part B)	Education (Part B)
Anthropometrics (Part C)	Anthropometrics (part C)
Social Mobility (Part D)	Social Mobility (Part D)
Daily Expenditure (Part E)	Point of Purchase Module (Part M)
Food Consumption Expenditure (Part F)	Food Stamps (Part I)
Consumption Expenditure (Part G)	Housing (Part J)
Non-Consumption Expenditure (Part H)	Durable Goods (Part K)
Food Stamps (Part I)	Miscellaneous Income(Part L)
Housing (Part J)	Daily Expenditure (Part E)
Durable Goods (Part K)	Food Expenditure (Part F)
Miscellaneous Income (Part L)	Consumption Expenses(Part G)
Point of Purchase Module (Part M)	Non-Consumption Expenditure (Part H)

1.12 The shortened item-by-item consumption module, however, was canvassed on a different sample of households from the one canvassed with standard consumption modules, because it was derived from the same pattern of commodity groupings as the standard modules though with further aggregation of the items. The two modules, if canvassed on the same households, would influence the reported consumption figures. The sample for canvassing this module was 1,248 dwellings, selected at the rate of 8 dwellings from each of the 156 EDs covered by SLC 94. These were the dwellings of the two panels covered in the July LFS, but replaced in the October 1994 LFS.

1.13 Thus, two questionnaires were canvassed in SLC 94: one which contained all the standard modules and the point of purchase module and the other which contained the shortened item by item consumption module, which was canvassed on a different sample of 8 dwellings each in the 156 sample EDs.

1.14 The layout of this report is as follows. In the next section, that is, section II, the procedures adopted for cleaning the data sets of the point-of-purchase module and the consumption estimates derived from that module are discussed. Section III describes the data cleaning procedures adopted for the shortened item by item consumption module and the estimates of consumption derived from that module. In Section IV, the time taken for canvassing the three types of consumption modules is discussed.

II. POINT-OF-PURCHASE MODULE

THE MODULE

2.1 The Module was treated as Part M of the questionnaire containing the standard modules. It was divided into four Blocks, the coverage of which is described below:

Block M1: Meals consumed away from home in the last 7 days and last 30 days; Purchases in the last 7 days and last 30 days at all supermarkets and other self-service establishments, green groceries, meat shops, liquor/beverage shops, bakeries, market/street vendors, vegetable and fruit shops, other retail stores dealing in food, beverages and tobacco and household supplies, wood/charcoal vendors, petrol/gasolene retailers and kerosene vendors;

Block M2: Cooking Gas

Block M3: Purchases in the last 30 days and last 12 months at-textiles and apparel shops, general purpose stores, phar macies and drug stores, furniture, furnishings etc. stores, household appliance stores, market/arcade ven dors, books, stationery and newspa per vendors, sports goods and other retail stores;

Block M4: Payments during the last 30 days and last 12 months for motor car expenses, educational services, per sonal services, repair services, and other services.

DATA ENTRY/CLEANING

2.2 Before data entry, the questionnaires, including the point of purchase module were edited and coded and all clerical errors were removed at this stage. All questionnaires which were partly completed or not filled out at all in respect of standard modules were removed from data entry operations.

2.3 The data entry was done on personal computers and the computer printouts were compared with the questionnaires to spot data entry errors.

2.4 However, in the case of the point-of-purchase module, the cleaning process was taken as a separate operation, after preparation of SAS data

TABLE APPENDIX III.1
MEAN PER CAPITA CONSUMPTION, BY AREA AND BY STANDARD OR POINT OF PURCHASE MODULES, SLC 94

Item	Regions			
	Jamaica (N=941)	KMA (N=291)	Other Towns (N=190)	Rural Areas (N=460)
From Point-of-Purchase Module	($)	($)	($)	($)
Block M1	20,932	28,470	21,381	15,500
Block M2	305	386	336	236
Block M3	2,315	3,288	2,092	1,727
Block M4	4,048	6,265	3,437	2,752
Total Purchased	27,600	38,409	27,248	20,215
Imported from Standard Modules				
Housing	3,227	5,362	3,560	1,605
Homegifts	2,245	2,099	1,877	2,496
Total Point of Purchase Consumption	33,072	45,870	32,683	24,316
From Standard Modules-				
Purchased	28,243	38,992	27,172	21,192
Total Consumption	33,715	46,453	32,609	25,292

sets. The consumption expenditure data collected in Part M, that is, point-of-purchase module, was annualised. The method followed was identical to that adopted for annualising the consumer expenditure data collected in the standard modules. For each of the households covered by the point-of-purchase module, the corresponding value of home production and gifts and expenses from the housing module were imported from the standard modules and the total consumption and mean per capita consumption were worked out. At this stage, four indicators were adopted for cleaning the data, namely, the percentage of purchases reported in Blocks 1 to 4 mentioned above, to the total consumption. These indicator values were calculated for all households along with the corresponding mean and standard deviation for these four variables.

2.5 For each of these indicators, the point-of-purchase modules which fell beyond the range "mean plus or minus two standard deviations" were taken for detailed scrutiny. Out of 956 point of purchase modules included in the data set, 62 modules were thus taken for scrutiny. Out of these, 15 modules with nil or negligible values in Block M1, which covers all food purchases, were rejected; 9 modules with clerical errors corrected; and the remaining 38 modules were accepted.

2.6 Thus, against 956 households included in the data set, 941 were considered in the final processing - 291 from the Kingston Metropolitan Area (KMA); 190 from Other Towns; and 460 from Rural Areas.

DATA SET ANNUAL_P:

2.7 The data set ANNUAL_P gives for these 941 households used in the analysis of point-of-purchase module, the relevant identification details, household size, non-response raising factor, annual expenditures reported in Blocks 1 to 4, the corresponding imported expenditures on home production, gifts and housing, and purchased and total consumption expenditure from the standard consumption module to facilitate comparisons.

THE ESTIMATES:

2.8 Data in Table 2.1 below indicate the mean per capita consumption estimated from the point-of-purchase module and the corresponding estimate from the standard consumption modules for

TABLE APPENDIX III.2
STANDARD ERRORS OF THE MEAN PER CAPITA ESTIMATES FROM THE POINT-OF-PURCHASE AND STANDARD MODULES SLC 94

Region	Point-of-Purchase		Standard Modules		Difference in Means		Z
	Mean Cons ($)	S.E ($)	Mean Cons ($)	S.E. ($)	Diff. ($)	S.E. ($)	Stat-istic
Total Consumption							
Jamaica	33,072	1,269	33,715	1,358	643	1,859	0.35
KMA	45,870	2,554	46,453	3,192	583	4,088	0.14
Other Towns	32,683	3,375	32,609	3,127	(-)74	4,601	-0.02
Rural Areas	24,316	1,382	25,292	1,105	976	1,769	0.55
Purchased Consumption							
Jamaica	27,600	1,046	28,243	1,163	643	1,564	0.41
KMA	38,409	2,243	38,992	2,806	583	3,592	0.16
Other Towns	27,246	2,618	27,172	2,525 (	-)74	3,637	-0.02
Rural Areas	20,215	1,058	21,191	901	976	1,390	0.70

S.E.= Standard Error. The standard error of the difference in means is calculated assuming independence of the samples. It is the square root of the sum of variances of the two means.

the three regions.

2.9 The estimates of mean per capita consumption from the Point-of-Purchase Module (including the home production and gifts and housing) were very close to those estimated from the Standard Modules. They differed from the estimates from the Standard Modules by -1.9 per cent for all Jamaica; -1.3 per cent for KMA; + 0.2 per cent for Other Towns; and -3.9 per cent for Rural Areas.

2.10 Even if Purchased Consumption alone was considered, that is, not considering the imported home-production and gifts and housing, the differences between the estimates of point-of-purchase module and standard modules were -2.3 per cent for all Jamaica; -1.5 per cent for KMA; +0.3 per cent for Other Towns; and -4.6 per cent for Rural Areas.

2.11 None of the above differences was statistically significant. The relevant standard errors of the estimates, calculated using the formulae given in the Appendices to the SLC reports, are presented in Table Appendix III.2.

2.12 Under the hypothesis that there is no dif-

TABLE APPENDIX III.3
MEAN PER CAPITA CONSUMPTION, BY ORDER OF CANVASSING THE MODULES, 1994

Item	Order 1 (N=456)			Order 2 (N=484)		
	Mean Consumption ($)	Standard Error ($)	%	Mean Consumption ($)	Standard Error ($)	%
Total Annual Consumption						
Stndrd Module	33,855	2,027	6.0	33,620	1,502	4.5
Popul. Module	32,750	2,178	6.7	33,242	1,524	4.6
Purchased Consumption						
Stndrd Module	28,270	1,529	5.4	28,234	1,322	4.7
Popul. Module	27,165	1,751	6.5	27,857	1,344	4.8

ference in the population means for the two types of consumption modules, the Z statistic, which is obtained by dividing the observed difference by its standard error, is distributed, for large samples, in the normal distribution with zero mean and unit standard deviation. For this distribution, 95 per cent of the observations are within the range + or - 1.96 and 99 per cent within the range + or -2.58. Any observed Z statistic beyond these limits would indicate significant difference in the means in the population. The above observed Z scores, however, are much less than these limits.

Order of Canvassing the Modules

2.13 The order of canvassing the modules also had no effect on the estimates. The data in Table Appendix III.3 present the estimates for the two orders described in paragraph 1.11.

2.14 The differences in the estimates between Order 1 and Order 2 and between the modules within the same order are not statistically significant.

2.15 It was observed that, if the differences in the estimates of total consumption according to standard and point-of-purchase modules are considered at the household level, in about 60 per cent of households, the differences are between + or -20 per cent and in 75 per cent of households the differences are between + or -30 per cent. The distribution of differences also indicates that underestimates or overestimates (standard module is taken for comparison) were more or less evenly distributed, as shown in Table Appendix III.4.

2.16 The almost even distribution of positive and negative differences resulted in very close mean consumption estimates from the two different approaches, namely, the commodity approach and the shop approach. Perhaps, an in-depth study of the differences will reveal the weakness in either of the two approaches.

III. SHORTENED ITEM-BY-ITEM CONSUMPTION MODULE

THE MODULES

3.1 As mentioned in paragraphs 1.3 and 1.5, the shortened item- by- item consumption modules were patterned in the same manner as the standard consumption modules but with further grouping of allied items to reduce the overall time required in recording the consumption and non-consumption expenditures. The consumption modules in the shortened version are designated as Parts E to H, corresponding to the nomenclature used in the standard modules.

3.2 Since the shortened item-by-item consumption modules were canvassed on a different sample from the one used for the standard mod-

TABLE APPENDIX III.4
DISTRIBUTION OF HOUSEHOLDS ACCORDING TO PERCENTAGE DIFFERENCE IN TOTAL CONSUMPTION ACCORDING TO POINT-OF-PURCHASE AND STANDARD MODULES, 1994

Percentage Difference in estimated Consumption	Number of households	Percentage of total
Minus 50% or more	20	2.1
Minus 41% - 49%	34	3.6
Minus 31% - 40%	67	7.1
Minus 21% - 30%	90	9.6
Minus 11% - 20%	139	14.8
Plus or Minus 10%	347	36.9
Plus 11% - 20%	85	9.0
Plus 21% - 30%	50	5.3
Plus 31% - 40%	33	3.5
Plus 41% - 50%	21	2.2
Plus 50% or more	55	5.8
Total	941	100.0

TABLE APPENDIX III.5
ESTIMATES OF HOUSEHOLD SIZE AND COMPOSITION AND PERCENTAGE OF HOUSEHOLDS WITH FEMALES AS HEAD, SLC 94

Item	Main Survey (N= 1940)		Shortened Modules (N= 936)	
	MEAN	S.E	MEAN	S.E
Total Household Size	3.69	0.06	3.66	0.08
No. of Adult Males	1.16	0.02	1.18	0.03
No. of Adult Females	1.26	0.02	1.26	0.03
No. of Children	1.27	0.04	1.22	0.05

S.E. - Standard Error

ules, a separate cover page to record the identification details such as parish, constituency, ED number, dwelling number and serial number of the household was introduced. A roster for recording the details of household head and other members, as in the general survey was also introduced. Thus, the questionnaire for the shortened item-by-item consumption modules included, apart from the cover page, the following:

Part E: Daily Expenditure
Part F: Food Expenses
Part G: Consumption Expenditure
Part H: Non-consumption Expenditure
Household Roster

DATA ENTRY/CLEANING

3.3 Before data entry, the questionnaires were edited and coded following the same procedures as in the case of standard modules. All incomplete or partially completed questionnaires, as well as questionnaires on vacant or closed dwellings, and refusals were removed at this stage.

3.4 Then the expenditure data reported in Parts E to H were annualised following the same methodology as for standard modules.

3.5 The cleaning procedures were designed on lines similar to the standard modules. Three indicators were selected, namely, (i) the per capita consumption (excluding housing), (ii) the percentage expenditure on food (including meals consumed away from home) and (iii) meals consumed away from home. These indicator values were calculated for all sample households along with the corresponding mean and standard deviation for these three variables.

3.6 For each of these indicators, those households which fell beyond the range "plus or minus two standard deviations" were taken up for scrutiny. Out of these, 74 questionnaires were examined for possible discrepancies. Some 9 questionnaires were rejected because the data on food expenses were incomplete; 17 corrected for clerical errors and 48 accepted.

TABLE APPENDIX III.6
ESTIMATES OF MEAN PER CAPITA CONSUMPTION FROM THE SHORTENED MODULES AND THE STANDARD CONSUMPTION MODULES, SLC 94

Region	Shortened Cons. Modules		Standard Cons. Modules		Difference		Z Statistic
	Mean Cons. ($)	S.E. ($)	Mean Cons. ($)	S.E. ($)	Diff. ($)	S.E. ($)	
KMA	35,887	2,496	46,127	2,028	-10,240	3,216	-3.18
Other Towns	25,828	2,359	32,406	2,010	-6,578	3,099	-2.12
Rural Areas	19,691	922	24,296	868	-4,605	1,266	-3.64
Jamaica	25,908	1,012	32,712	869	-6,804	1,334	-5.10

S.E. - Standard Error

TABLE APPENDIX III.7
MEAN ANNUAL PER CAPITA CONSUMPTION BY COMMODITY GROUPS, JAMAICA, SLC 94

Commodity Group	Shortened Cons. Modules (N= 936) ($)	%	($)	Standard Cons. Modules (N=1940) %
Food & Beverages	13,811	53.3	17,462	53.4
Fuel & Household Supplies	1,445	5.6	1,800	5.5
Household Operational Expenses	1,344	5.2	502	1.5
Other Housing Expenses	3,189a	12.3	3,189	9.7
Household Durable goods	437	1.7	534	1.6
Personal Care	645	2.5	870	2.7
Health Care	974	3.8	760	2.3
Clothing & Footwear	1,477	5.7	3,481	10.6
Transportation	1,104	4.3	2,349	7.2
Education	678	2.6	773	2.4
Recreation	284	1.1	351	1.1
Miscellaneous Consumption	522	2.0	640	2.0
Total Consumption	25,908	100.0	32,712	100.0

a - Imported from standard modules

3.7 Thus, against 945 household questionnaires included in the data set, 936 were considered in the final processing- 279 from KMA; 188 from Other Towns; and 469 from Rural Areas.

DATA SET ANNUAL_S

3.8 The data set ANNUAL_S gives for these 936 households the annualised expenditure estimates from the shortened item-by-item consumption modules for all variables as in data set ANNUAL for the standard modules, with one exception, the housing expenses which were excluded.

THE ESTIMATES

3.9 Some estimates of demographic characteristics were made from the data collected in the roster included in the questionnaire covering the shortened item-by-item consumption modules. These were compared with those from the main survey, that is, the questionnaire which included the standard modules. These are presented in Table Appendix III.5.

3.10 There is close agreement in the estimates of the above demographic characteristics between the two surveys, indicating the representative character of the sample used for the shortened item-by-tem consumption modules. The differences in the point estimates of these variables are not statistically significant.

3.11 The estimates of mean per capita consumption from the shortened item-by-item questionnaire were, however, much lower than those derived from the standard consumption modules, as shown in Table Appendix III.6.

3.12 The mean per capita estimate from the shortened item-by item-consumption module was 22.2 per cent lower than that from the standard module for KMA; 20.3 per cent for Other Towns; 19.0 per cent for Rural Areas and 20.8 per cent for Jamaica. The Z scores are quite high; and the differences in means are statistically significant.

3.13 The percentage shares of total consumption by commodity groups for Jamaica shows that the estimates from the shortened item by item consumption modules were all lower than those from the standard consumption modules, except for household operational expenses and health care,

3.14 The shortened item-by-item consumption modules cover household operational expenses but not housing. In the above table, the mean housing expenses were taken from the standard modules.

3.15 Most of the shortfall of $ 6,804 in the mean

TABLE APPENDIX III.8
MEAN PER CAPITA ANNUAL FOOD & BEVERAGES CONSUMPTION, BY COMMODITY GROUPS, JAMAICA, SLC 94

Commodity Group	Shortened Consumption Modules (N= 936)		Standard Consumption Modules (N=1940)	
	($)	%	($)	%
Meat, Poultry & Fish	3,026	21.9	4,306	24.7
Dairy Products	719	5.2	1,749	10.0
Oils & Fats	561	4.1	476	2.7
Cereals & Cereal Products	2,437	17.6	2,177	12.5
Starchy Roots & Tubers	593	4.3	1,030	5.9
Vegetables & Juices	690	5.0	773	4.4
Fruits	359	2.6	426	2.4
Sugar/Sweetsa	405	2.3		
Miscellaneous Food	375	2.7	954	5.5
Breakfast Drinks, Beverages	517	3.7	781	4.5
Meals away from home	4,533	32.8	4,386	25.1
Total Food & Beverages	13,811	100.0	17,462	100.0

a - Sugar included in cereals group and Sweets in Misc. Food.

per capita consumption estimate from the shortened consumption modules compared with that from the standard modules, was accounted for by the Food & Beverages group ($3,651), Clothing & Footwear group ($2,004) and Transportation group ($1,245). The standard consumption modules specified 8 items under Clothing, Footwear and accessories group, which were condensed to one item in the shortened modules. Similarly, the standard modules listed 6 items under Motor Vehicle expenses which were grouped into one in the shorter version. Perhaps, this might be the reason for the underestimation in the consumption expenditure on these two groups.

3.16 As for the shortfall in the estimated consumption of Food & Beverages, the breakdown of consumption subgroups under Food is given in Table Appendix III.8.

3.17 Out of the shortfall of $3,651 in the estimated consumption of Food & Beverages from the shortened consumption modules, $1,280 was accounted by the Meat group; $1,030 by Dairy Products group; $437 by Starchy Roots & Tubers; and $579 by Miscellaneous Food. The Meat group items which numbered 13 in the standard modules were condensed to 3 in the shortened version; the Dairy Products group from 8 to 1; Starchy Roots & Tubers from 4 to 1; and Miscellaneous Food from 9 to 1. These groups need to be examined.

3.18 A table showing the correspondence of items in the shortened item-by-item consumption modules to those in the standard consumption modules, was included in the interviewers' instruction manual.

IV. TIME TAKEN FOR CANVASSING THE THREE TYPES OF CONSUMPTION MODULES

4.1 The median time taken for canvassing standard consumption modules was the highest at 50 minutes per household, followed by the shortened item-by-item consumption modules with 37 minutes and was the lowest for point-of-purchase module with 29 minutes per household. The point of purchase modules, however, do not include the data on home production and gifts, for which allowance has to be made in the above estimate. The time taken for canvassing the housing modules, which contain the housing expenses is not taken into account in all the above three estimates.

4.2 The time taken per household for canvassing the consumption modules was tabulated according to time ranges. These are presented in

TABLE APPENDIX III.9
PERCENTAGE DISTRIBUTION OF HOUSEHOLDS ACCORDING TO TIME TAKEN FOR CANVASSING THE CONSUMPTION MODULES, SLC 94

Canvassing time per household (Minutes)	Standard Cons. Modules (%)	Shortened Cons. Modules (%)	Point of Purchase Modules (%)
15 minutes or less	1.7	5.2	21.0
16- 30 minutes	16.6	32.6	42.5
31- 45 minutes	26.9	29.5	20.5
46- 60 minutes	24.6	15.9	9.6
61- 90 minutes	22.1	14.3	5.0
91-120 minutes	5.8	1.1	1.0
121 minutes or more	2.3	1.4	0.4
Total	100.0	100.0	100.0
Median(minutes)	50	37	29

Table Appendix III.9.

4.3 The point-of-purchase module was completed in 45 minutes or less for 84 per cent of the households, while the corresponding percentage was 67.3 per cent for shortened item by item consumption modules and 45.2 per cent for standard consumption modules. On the other hand, it took more than one hour to complete the standard consumption modules for 30.2 per cent of the households, while the corresponding percentage was 16.8 in the case of shortened item by item consumption module and only 6.4 per cent for point of purchase module.

Summary

4.4 Some of the aggregates generated from the data collected in the two experimental consumption modules showed that while the estimates of mean per capita consumption generated from the point- of-purchase module were close to those from the standard consumption modules, the corresponding estimates from the shortened item-by-item consumption modules differed significantly from those generated from the standard consumption modules. The aggregation of commodities in the shortened module in respect of Meat (fresh or frozen), Dairy Products, Starchy Roots & Tubers, Clothing & Footwear and Transport (Motor Vehicles) needs revision, as the estimates of mean per capita consumption for these items were substantial under-estimates compared with the corresponding estimates from the standard consumption modules.

4.5 In the case of point-of-purchase module, though the overall estimates of mean per capita consumption were close to those estimated from the standard consumption modules, a comparison of the estimates at the household level, from these two sets of modules showed substantial differences in a sizeable number of households, which require further scrutiny to assess the weakness in either of the two approaches.

Abbreviations/ Acronyms

BCG	Bacillus Calmette-Guerin (vaccination against tuberculosis)
CFNI	Caribbean Food and Nutrition Institute
CPI	Consumer Price Index
DPT	Diphtheria, pertussis, tetanus
ED	Enumeration district
ESSJ	Economic and Social Survey, Jamaica
FSP	Food Stamp Programme
GCT	General Consumption Tax
HES	Household Expenditure Survey
HRDP	Human Resources Development Programme
KMA	Kingston Metropolitan Area
LFS	Labour Force Survey
MOE	Ministry of Education
N	Number of observations
NWC	National Water Commission
NPL	Nutrition Products Limited
OPV	Oral polio vaccine
PIOJ	Planning Institute of Jamaica
SAP	Structural Adjustment Programme
SAS	Statistical Analysis Software
SFP	School Feeding Programme
SLC	Survey of Living Conditions
STATIN	Statistical Institute of Jamaica
WC	Water closet