Jamaica Survey of Living Conditions (JSLC) 1988-2000

Basic Information

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PRINCIPAL ABBREVIATIONS AND ACRONYMS USED

CAT	California Achievement Test
CFNI	Caribbean Food and Nutrition Institute
ED	Enumeration District
JSLC	Jamaica Survey of Living Standards
LFS	Labor Force Survey
LSMS	Living Standards Measurement Survey
PIOJ	Planning Institute of Jamaica
PSU	Primary Sampling Unit
SR	Sampling Region
STATIN	Statistical Institute of Jamaica

Contents

The material covering 1988-92 was compiled by Raylynn Oliver under the direction of Margaret Grosh with assistance from Qing-hua Zhao, Dean Jolliffe, and Paul Glewwe of the World Bank. Diane Steele updated the report to cover 1993 through 2000. The substantial contribution of the Statistical Institute of Jamaica and the Planning Institute of Jamaica, especially that of Mr. P. B. K. Murthy, is gratefully acknowledged.

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Basic Information

1. OVERVIEW

As of 2002, Living Standards Measurement Study (LSMS) household surveys have been conducted in over 30 countries. The purpose of these surveys is to provide household level data for evaluating the effect of a variety of government policies on the living conditions of the population. Because the LSMS surveys gather data on many aspects of household welfare, it is possible to describe the relationships between these different aspects of the quality of life and to analyze the determinants of various socio-economic outcomes.

The Jamaica Survey of Living Conditions (JSLC) was first conducted in 1988. The JSLC was originally conceived to be a semi-annual survey. Early on the schedule was interrupted by Hurricane Gilbert and national elections. In 1990, an annual survey was deemed to be sufficient and an annual schedule was adopted. Fourteen rounds of the survey were completed from August 1988 to July 2000: 1988, 1989-1, 1989-2, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000.

The nationwide survey was implemented to establish baseline measures of household welfare and then to monitor the impact of Jamaica's Human Resources Development Program on health, education and nutrition. The JSLC differs from other LSMS surveys in its relatively narrow focus and greater emphasis on immediate policy impact.[1] The JSLC is linked to the on-going quarterly Labor Force Survey (LFS). The households are visited once for the standard LFS. Then a subset of households are revisited about a month later for the SLC. When the data sets are merged, the LFS serves as the employment module of the combined LFS/SLC. To avoid respondent fatigue, the JSLC household questionnaire is short enough so that it can be administered in one interview (as compared to two interviews in the typical LSMS survey). In general, each JSLC questionnaire has included modules on health, education, nutrition, consumption, and housing. On a rotating basis, designated topics have received additional emphasis. To date, expanded modules for Health, Poverty, Education, Housing, Consumption, Household Finances, Employment, Aging, and Coping Strategies have been carried out. The JSLC surveys contain no data on agricultural activities, non-agricultural household activities, or migration. Only the 1989-2 survey has a fertility module. The abstracts prepared by the Statistical Institute of Jamaica and the Planning Institute of Jamaica, listed in Appendix C, provide summary statistics for each round of the JSLC.

[1] Grosh (1991) discusses the rationale, advantages and disadvantages of the departures from the standard LSMS approach implemented in Jamaica.

This document describes the JSLC questionnaires and data for potential users.[2] Survey content, sample design and fieldwork are outlined in Sections 2 through 4. Section 5 describes the characteristics of the data and the procedures for linking the various components of the data. The constructed data sets that are available are described in Section 6. Appendix A describes the procedure for obtaining the data. The data sets and additional documentation are listed in Appendices B and C, respectively. Appendix D catalogs the research that has been conducted with the JSLC data. The remaining appendices provide school code corrections, price indices, and data codes not in the questionnaire.

2. SURVEY QUESTIONNAIRES

The purpose of this section is to describe the coverage of the JSLC questionnaires, pointing out differences across years and deviations from the standard LSMS questionnaire. Section 2.1 describes the core household questionnaire. Sections 2.2 and 2.3 describe the health services and school modules used in 1989-2 and 1990, respectively.

Unlike many LSMS surveys, the JSLC does not include price and community questionnaires. Because Jamaica is small and has a good transport network, regional price variation was expected to be small and, for this reason, price data were not collected.[3] Much of the distance to, and availability of, services and infrastructure that is usually gathered in the LSMS community questionnaire is collected in the JSLC's household, health services and school questionnaires described below.

2.1 Core Questionnaire

For each round of the JSLC, the household questionnaire has included modules covering health, education, anthropometric measurements for all children less than five years old, daily expenses, consumption expenditures, non-consumption expenditures, food expenses, consumption of home production, housing, an inventory of durable goods, other household income, and food stamps. Employment and job search information for all adults age 14 or older is available from the Labor Force Survey. The JSLC household questionnaire was completed in one interview approximately one month after the Labor Force Survey.[4] The JSLC questionnaire has undergone substantial revision since 1988, reflecting accumulated experience and changing demands for data. For example, the food stamps and other income modules were added after the 1988 survey, in which these subjects were addressed only briefly in the housing module.

[2] For the most part, the information provided in this document is applicable no matter where the data are obtained. But for some things, as noted, it only applies to the data as available from the World Bank.

[3] Prices for the 38 items reported in the *Consumer Price Index* (STATIN, 1990) average 5 percent higher in the Kingston Metropolitan Area than in Other Towns and 6.7 percent higher than in Rural Areas. Monthly national and regional FOOD AND DRINK and ALL GROUPS consumer price indices are provided in Appendix F for the convenience of researchers using the JSLC data.

[4] In general, the households interviewed in the JSLC are a subset of the households interviewed in the Labor Force Survey.

The survey design allows for the expansion of a module of special emphasis in each survey since 1989-2 (see Table 1). The 1989-2 survey included an expanded health module with a fertility component and a survey of health facilities. The 1990 survey included an expanded education module, surveys of schools, and teachers, and collection of achievement test scores for primary and secondary students. The 1991 survey included an expanded housing module. Poverty was the focus of the 1992 survey. In 1993, two new modules were done, one on employment and time use and one on adequacy of consumption. In 1994, two experimental consumption modules were tested and a new module on social mobility was added. The 1995 survey contained a module emphasizing people aged 60 years and older. In 1996, the special modules were on consumer satisfaction with health services and on child fostering. Earnings, income, savings and credit were emphasized in 1997. In 1998 and 2000, there were no focus topics, and in 1999 the topic was poverty and coping strategies.

The evolution of the content of the basic modules and the coverage of the extended modules are discussed below.[5] The details provided are meant to help potential analysts decide whether one or more years of data are likely to support a given analysis. The potential user should always consult the actual questionnaires to ensure that the questions and their comparability across time are adequate for the analyst's purpose.

2.1.1 Cover Page

The survey information section of the questionnaire contains the date of the interview, the parish, constituency, enumeration district and dwelling number as well as the interviewer, supervisor and time of the interview for each household.[6] These numbers, and the four digit serial number can be used to identify the household and link the various data sets. Linking procedures are discussed in detail in Section 5.4.

Jamaica is divided into fourteen administrative regions called parishes. Each parish is composed of several constituencies. In the most common case the parish is divided into four constituencies: northwest, northeast, southwest, southeast. An enumeration district is a group of dwellings established for the population census. For the LFS/JSLC, these census EDs were combined wherever necessary, to ensure that no combination contains less than 80 dwellings. The ED number of the first ED in this combination is generally adopted as the identification number of the ED. The dwelling number identifies the dwelling within the enumeration district.

[5] For complete details, the questionnaires can be obtained from the World Bank or on the LSMS Web Site, see Appendix C.

[6] For the 1982 Population Census the following definition of household was adopted and has been used for all household surveys conducted since then in Jamaica: a *household* consists of one person who lives alone or a group of persons, who, as a unit, jointly occupy the whole or part of a dwelling unit, who have common arrangements for housekeeping, and who generally share at least one meal. The household may be composed of related persons only, of unrelated persons, or of a combination of both. The same definition was adopted for the 1991 Population Census. This and other definitions are provided in the 1992 Interviewers Instruction Manual (see Appendix C).

Table 1. Description of JSLC Coverage

	Jamaica Survey of Living Conditions		
	Household Questionnaire, Module of Special Emphasis	Associated JSLC Questionnaires	# of Households Interviewed
1988	11 Modules		1,909
1989-1	14 Modules		2,005
1989-2	16 Modules, Expanded Health Fertility Module Last Pregnancy Module Activities of Daily Living	Public Primary Health Services Public Secondary and Tertiary Health Services Private Primary Health Services Private Secondary and Tertiary Health Services	3,937
1990	14 Modules, Expanded Education	Primary and Secondary School Administrators Primary and Secondary School Teachers Achievement Test Scores	1,828
1991	14 Modules, Expanded Housing		1,786
1992	13 Modules, Focus on Poverty		4,485
1993	14 Modules, Expanded Employment and Time Use		1,963
1994	14 Modules, Experimental Consumption Modules	Shortened Item by Item Consumption Module questionnaire used on a second sample	1,940
1995	13 Modules, Aging		1,976
1996	14 Modules, Consumer Satisfaction with Health Services, Child Fostering		1,825
1997	17 Modules, Employment and Earnings, Adequacy of Income, Savings, Money Borrowed and Money Lent		2,020
1998	12 Modules		7,375
1999	12 Modules, Poverty and Coping Strategies		1,876
2000	12 Modules		1,800

2.1.2 Roster

Each individual can be identified with the household identification number and the personal identification number. For all rounds of the JSLC, the age and sex are collected for each individual in the household. In the 1989-1991 surveys, additional information was collected, as outlined in the table below. All household members age 14 or over were asked their religion. If the father and or mother are household members, then the personal identification numbers of those parents were noted. The level of completed schooling was noted for non-resident mothers and fathers. Parent's information and the individual's religion were not collected in the 1992 questionnaire. Questions are added on receipt of public assistance, disabilities and principal earner's occupational status. In 1988, the household head is the first individual listed. In later surveys the relation to household head is noted in a separate variable.

Table 2. Content of the JSLC Roster Module

	Roster
1988	Includes personal identification number, age, sex and household member
1989-1	Adds religion, mother's and father's education level or id number
1989-2	Adds relation to household head, marital status (married, never married, divorced, separated, widowed), partner's id, mother's/father's years of completed schooling
1990	same as 1989-2
1991	Adds union status (married, common law, visiting, single, none)
1992	Drops mother's/father's schooling and identification, religion Adds receipt of public assistant and question on physical/mental disability Additional module contains questions on Principal Earner's Occupational Status
1993	Same as 1992
1994	Same as 1992, question on physical/mental disability expanded to all household members
1995	Same as 1994
1996	Same as 1994
1997	Same as 1994
1998	Same as 1994
1999	Same as 1994
2000	Adds identification of parents for children 15 and younger; drops question on physical or mental disability (moved to health section)

2.1.3 Health

The health module is designed to gather the information necessary to measure the costs and the use made of different kinds of health services and facilities. Information is collected directly from each household member; parents were allowed to respond for young children. For each household member, the respondent reported on one illness or injury, if any, sustained in the last four weeks (and on the most recent if the respondent reported more than one). The type, location and cost of any care sought was noted. Health insurance coverage, hospitalization, medication and immunizations were also surveyed. Prior to 1992, women age 15 to 49 were asked questions regarding pregnancies, births and breast-feeding in the previous year. Starting in 1992, the age range was changed to 13 to 49.

The 1989-2 questionnaire included an expanded health module with more detail on use of services and activities of daily living, and two additional modules: one on fertility and contraception and a second on the details of the last pregnancy. For each household, one woman 15 to 45 years old responded.[7] Questions were asked on number of pregnancies, birth, living children, living resident children, use, source and cost of contraception. A pregnancy roster that included use of contraception during birth intervals was completed. The last pregnancy detail includes questions on prenatal care, delivery, health complications, breast-feeding and weaning, and employment and maternity benefits.

[7] Since this differs from the standard definition of fertile-aged used in Jamaica of 15-49 years, calculated total fertility rates are not directly comparable to those calculated from other sources of data on Jamaica. However, only 0.2% of births in Jamaica occur to women in the 45 to 49 year age group.

Table 3. Content of the JSLC Health Module

	Health
1988	Consultation and expenses related to an illness or injury in the last four weeks Use of preventive services in the past 12 months Status of fertile-aged women
1989-1	Consultation and expenses related to an illness or injury in the last four weeks Cost, source, and availability of medicines Preventive services in the past 6 months
1989-2	Same as 1989-1 Plus: Activities of Daily Living of each household member age 14 and above Fertility Module: number of pregnancies, births, living children, use of contraception Last Pregnancy Detail: prenatal care, delivery, health complications, breast-feeding, maternity benefits
1990	Same as 1989-1 Plus: Status of fertile-aged women
1991	Same as 1989-1 Plus: Status of fertile-aged women and Chronic illnesses No preventive services
1992	Same as 1991 Plus: Use of prenatal and infant care in public health clinics, fertility questions asked to women 13-49
1993	Same as 1992 except questions on specific conditions excluded, plus hospitalization expenses during past 12 months.
1994	Same as 1993
1995	Same as 1994 except questions on annual hospitalization expenses were excluded
1996	Same as 1995 Plus: Sub-module on consumer satisfaction with several aspects of care for public health centers, private doctors and public hospitals.
1997	Same as 1995
1998	Same as 1995 Plus: questions on witness to or participation in a violent act, payments to alternate private practioners, use of medicines (over the counter, prescription)
1999	Same as 1998 minus questions on payment to alternate private practioners
2000	Same as 1999, changed question on start of illness to whether is recurring illness; added question on visits to health practitioners in last 6 months and physical and mental disabilities; dropped questions to women with children under 1 year old; expanded question for children 0 to 59 months to differentiate between visits to private and public practitioners

2.1.4 Education

Given Jamaica's nearly universal primary enrollment, the JSLC's education module has been enlarged (compared to other LSMS surveys) to include information on drop-outs, availability of teaching materials, etc. In the 1988 survey, only household members 3 to 13 years old are included in the education module. All household members over age 3 are included in later JSLC surveys.

Respondents were asked what type of school was attended in the last academic year and, when the child had not attended school, the reasons for the non-attendance were collected. The years of primary education and the years of secondary education were collected. Each child was asked if there was food supplied at school. For all rounds of the JSLC, the highest level of schooling attained is also available for all surveyed adults age 14 and above in the Labor Force module.

Table 4. Content and Respondents to the JSLC Education Module

	Education	Respondents
1988	Type of school attended, grade in school, years repeated, school feeding programs, reasons for non-attendance, type of school last attended, highest grade completed	Age 3 to 13
1989-1	Same as 1988 Added: examinations taken and reasons for absenteeism Current School: Type, travel time and distance, school feeding, textbook cost and School expenses	Age 3 to 19
1989-2	Same as 1988 Adds repeating, living at home	Age 3 and over
1990	Same as 1989-1 with more detail for respondents in each of the following groups: Persons not in school with only primary schooling Persons not in school with only secondary schooling Persons presently enrolled in primary school Persons presently enrolled in secondary school Persons still in post-secondary school	Age 3 and over
1991	Same as 1989-2	Age 3 and over
1992	Same as 1989-2 Drops questions on repeating and attendance	Age 3 and over
1993	Same as 1989-2 plus question on whether or not the child actually took the meal provided at school	Age 3 and over
1994	Same as 1993 plus details on the costs incurred by the household on education of each child	Age 3 and over
1995	Same as 1994	Age 3 and over
1996	Same as 1994	Age 3 and over
1997	Type of school, grade in school, distance of school from house, travel time, attendance in school April 7-May 2, reason for absence, attendance of school on Fridays, school feeding and child's use of program, school expenses	Age 3 and over
1998	Same as 1997	Age 3 and over
1999	Same as 1997 plus question on highest academic examination passed	Age 3 and over
2000	Same as 1999 plus questions on skills	Age 3 and over

2.1.5 Anthropometrics

For each young child, the day, month and year of birth and the age in years and months was collected. Weight and length measurements were taken, the immunization coverage of the child was noted as well as whether each child had experienced diarrhea within the previous two weeks.

Table 5. Content and Children Measured for the JSLC Anthropometric Module

	Anthropometrics	Children Included
1988	Birth date, age, registered, weight, length, diarrhea, immunizations Height and Weight measurements are not reliable (see Section 5.2)	Less than 5 years
1989-1	Adds "Has the child ever been to Public Health Center"	Less than 6 years
1989-2	Adds birth weight, Drops public health center	0 to 59 months
1990	Same as 1989-2	0 to 59 months
1991	Same as 1989-2	0 to 59 months
1992	Adds questions on breast-feeding and weaning for children less than 12 months old	0 to 59 months
1993	Same as 1989-2	0 to 59 months
1994	Same as 1989-2	0 to 59 months
1995	Same as 1989-2	0 to 59 months
1996	Same as 1989-2; Adds questions on confirmation of age via documents and confirmation of vaccinations from immunization card	0 to 59 months
1997	Same as 1996	0 to 59 months
1998	Same as 1996	0 to 59 months
1999	Same as 1996	0 to 59 months
2000	Same as 1996	0 to 59 months

2.1.6 Daily Expenses

The respondent was asked to recall the amount spent by the household during the week prior to the survey for seven categories of goods: food and beverages consumed away from home, charcoal, kerosene, wood, other cooking fuel (not gas or electricity), personal care items and tobacco products.

All monetary values were input as a single variable for JSLC rounds prior to 1991. For the 1988 monetary values, the single variable records cents and must be divided by 100 to obtain the dollar values. The 1991 through 1993 data sets have separate variables, the first for dollars and the second for cents, for each monetary value collected. In 1994 and 1995, the dollars and cents were treated as one numeric variable.

As in the previous surveys, the respondent of the 1993 JSLC was asked to recall the amount spent by the household during the week prior to the survey for seven categories of goods: food and beverages consumed away from home, charcoal, kerosene, wood, other cooking fuel (not gas or electricity), personal care items and tobacco products. In addition to this part, respondents were also asked more details about the expenses of meals and drinks consumed away from home during the past 7 days, including breakfast, lunch, dinner and drinks (alcoholic or non-alcoholic). This information was collected to assist the Caribbean Food and Nutrition Institute (CFNI) in their nutrient intake studies. The answers to this section should not include meals prepared at home and consumed away from home.

Note that the 1993 questionnaire design might leave a chance of ambiguousness: the answer to number of times consumed away from home in last 7 days and a value of purchase were put into a single box. Thus the value reported can be interpreted as value of each purchase or as the total value from those purchased. We took the second interpretation.

The 1994 through 1999 surveys returned to the module used in the 1992 survey in which details on individual meals were not collected. In 2000, meals eaten away from home were broken down into separate food categories.

Table 6. Content and Recall Period for the JSLC Daily Expenses Module

	Daily Expenses	Recall Period
1988	Food and beverages consumed away from home, charcoal, kerosene, wood, cooking fuel, personal care items and tobacco products	previous week
1989-1	"charcoal" changed to "coal" on questionnaire	past 7 days
1989-2	Same as 1989-1	past 7 days
1990	Same as 1989-1	past 7 days
1991	Same as 1989-1 Dollars and cents noted separately for each item	past 7 days
1992	Same as 1991 except Personal Care items are moved to Consumption Expenditure	past 7 days
1993	Same as 1992 except more detailed information collected on meals taken away from home	past 7 days
1994	Same as 1992. Second questionnaire contained shortened version	past 7 days
1995	Same as 1992	past 7 days
1996	Same as 1992	past 7 days
1997	Same as 1992	past 7 days
1998	Same as 1992	past 7 days
1999	Same as 1992	past 7 days
2000	Same as 1992, but meals away from home split into six categories	past 7 days

2.1.7 Non-Food Consumption Expenditures

The consumption expenditure section is based on the Jamaican Household Expenditure Survey that is conducted every five to ten years. The respondent was asked if the household spent money on or received as a gift anything in several categories of non-food items during the past 12 months. For household maintenance (cleaning supplies, home help services and rental of equipment) the amount spent during the past 30 days (recall period was sometimes 4 weeks) was recorded. For larger household expenses (cooking gas, furniture, furnishings, dinnerware, small kitchen equipment, repairs, medicines and medical services, transportation, gasoline, entertainment, schooling, vacation, health and car insurance, telephone) both the amount spent during the past 30 days/4 weeks and the amount spent during the past twelve months were noted. In addition to the amount spent during the past month and the past year, the estimated value of clothing and footwear received as gifts in the last twelve months was noted.

Table 7. Content and Recall Period for the JSLC Non-Food Consumption Module

	Non-Food Consumption Expenditures	Recall Period
1988	8 household maintenance, 26 large expense, 7 apparel	30 days/12 months
1989-1	Gift values on more goods, health and car insurance moved to non-consumption	4 weeks/12 months
1989-2	Separated car repairs and tires	4 weeks/12 months
1990	Same as 1989-2	4 weeks/12 months
1991	Same as 1989-2. Dollars and cents noted separately	4 weeks/12 months
1992	Same as 1991. Adds 3 personal care categories, health insurance, car insurance and motor vehicle taxes	30 days/12 months
1993	Same as 1992. Adds category for purchases for special occasions.	30 days/12 months
1994	Same as 1993. Second questionnaire contained shortened version	30 days/12 months
1995	Same as 1993.	30 days/12 months
1996	Same as 1993.	30 days/12 months
1997	Same as 1993.	30 days/12 months
1998	Same as 1993.	30 days/12 months
1999	Same as 1993.	30 days/12 months
2000	Same as 1993.	30 days/12 months

2.1.8 Non-Consumption Expenditures

The amount spent during the past 30 days/4 weeks and the amount spent during the past twelve months were noted for the non-consumption categories. These categories have changed over time and the number of categories has changed from seven in 1988 to ten in 1993 to nine in 1994 through 1996 to 13 in 1997 through 1998.

Table 8. Content and Recall Period for the JSLC Non-Consumption Module

	Non-Consumption Non-Food Expenditures	Recall Period
1988	Life and fire insurance, taxes, weddings and funerals, donations and gifts, loan and interest payments, maintenance of non-resident relatives, and other	30 days/12 months
1989-1	Added car insurance, health insurance	30 days/12 months
1989-2	Added support for children living elsewhere	30 days/12 months
1990	Same as 1989-2	30 days/12 months
1991	Same as 1989-2 Dollars and cents noted separately	30 days/12 months
1992	Car and health insurance and motor vehicle taxes moved to consumption NEC taxes excluded Includes horse racing and gambling expenses	30 days/12 months
1993	Same as 1992. Adds item for taxes and duties not elsewhere classified.	30 days/12 months
1994	Same as 1992. Second questionnaire contained shortened version.	30 days/12 months
1995	Same as 1992.	30 days/12 months
1996	Same as 1992.	30 days/12 months
1997	Same as 1992. Adds items for NHT, NIS, pension, and direct taxes.	30 days/12 months
1998	Same as 1997	30 days/12 months
1999	Same as 1997	30 days/12 months
2000	Same as 1997	30 days/12 months

2.1.9 Food Expenses

Regarding expenditures on food, the respondent was asked if there was any expenditure in the last twelve months on 43 categories of food items. For each item that had been purchased in the last year, the amounts spent during the past seven days and the amount spent during the past 30 days/4 weeks was recorded. In 1992 through 2000, the value of home production and gift food was integrated into the food expense module. Thus the number of items for which this information was collected was expanded from 43 to 55.[8]

Table 9. Content and Recall Period for the JSLC Food Expenses Module

	Food Expenses	Recall Period
1988	43 categories of food	7 days/30 days
1989-1	Aggregated canned fish; frozen, canned and dried vegetables; fruit and vegetable juice. Disaggregated rice and cornmeal.	7 days/30 days
1989-2	Same as 1989-1, except Biscuits moved from Bread to Other baked goods	7 days/4 weeks
1990	Same as 1989-2	7 days/4 weeks
1991	Same as 1989-2 Dollars and cents noted separately	7 days/4 weeks
1992	Combines food expense and consumption of home production and gifts 55 categories, disaggregated meat; separate categories for biscuits, Cassava bread, dried beans/peas, and ackee	7 days/30 days
1993	Same as 1992	7 days/30 days
1994	Same as 1992. Second questionnaire contained shortened version.	7 days/30 days
1995	Same as 1992.	7 days/30 days
1996	Same as 1992.	7 days/30 days
1997	Same as 1992.	7 days/30 days
1998	Same as 1992.	7 days/30 days
1999	Same as 1992.	7 days/30 days
2000	Same as 1992, but condensed/evaporated milk combined and Food Drinks added	7 days/30 days

2.1.10 Consumption of Home Production and Food Received as Gift

In the surveys done from 1988 through 1991, for sixteen food items, the respondent was asked if the household had eaten any food that was home-produced or that was received as a gift. The respondent was asked how much it would cost to buy the amount of home-produced food *consumed* during the past seven days and the amount consumed during the past 30 days/4 weeks, and the amount it would cost to buy the amount received as gift during the past 30 days/4 weeks. Starting in 1992, the value of home production and gift food was integrated into the food expense module (see section 2.1.9).

[8] In the 1992 questionnaire, two items on the questionnaire are numbered 417 - powdered milk, and butter or chiffon. This was corrected during the coding of the data. Item 417 is powdered milk and item 455 is butter or chiffon.

Table 10. Content and Recall Period for the JSLC Home Production Module

	Consumption of Home Production	Recall Period
1988	Beef, Fish, Poultry, Milk, Butter, Cheese, Eggs, Yams, Potatoes, Other roots, Other starchy foods, Fresh vegetables, Fresh fruits, Sugarcane, Nuts, Other foods	7 days/30 days
1989-1	Same as 1988	7 days/30 days
1989-2	Same as 1988	7 days/4 weeks
1990	Same as 1988	7 days/4 weeks
1991	Same as 1988 Dollars and cents noted separately	7 days/4 weeks

2.1.11 Adequacy of Consumption

In the 1993 JSLC, a module was included to measure the respondent's opinion of their family's standard of living. Six questions were asked to determine if the household feels that the present level of expenditure is adequate, more than adequate, or less than adequate.

Table 11. Content of the JSLC Adequacy of Consumption Module

	Adequacy of Consumption
1993	Food consumption, housing, clothing, access to transport, health care, and children's schooling.

2.1.12 Consumption Expenditures by Point of Purchase

The 1994 JSLC contained an experimental module to collect information based on the amount spent at specific shops instead of item purchases. This module was administered in addition to the usual consumption modules to about half of the sample.

Table 12. Content of the JSLC Point of Purchase Module

	Point of Purchase	Recall Period
1994	Meals away from home; food, beverage and tobacco shops, wood and charcoal vendors; petrol/gasoline retailers; kerosene dealers	7 days/30 days

2.1.13 Housing

The questions in the housing module are designed to characterize the type of dwelling occupied by the household and to determine the amount spent on housing, including rent, water, electricity, and other expenses. Characteristics of the dwelling include the type of dwelling (single family, apartment, etc.), size, material of outer walls, presence of a kitchen, toilet, and electricity and drinking water. Expenses include the amount paid for water and electricity. Information on ownership, rent, mortgage and taxes is also collected.

Table 13. Content of the JSLC Housing Module

	Housing
1988	Includes other income (remittances, pensions, rental, loans and food stamp)
1989-1	Adds question on condition of the house, Hurricane Gilbert damage, ownership of agricultural land
1989-2	Similar to 1988, drops size of dwelling, mortgage payment and other income questions
1990	Same as 1989-2 adds distance to schools for households with children ages 5 to 20
1991	Housing Characteristics; Mobility and Social Amenities; Utilities, source and expense for water, lighting, cooking fuel, telephone; Community Services: garbage disposal, transportation; Ownership; Renters; Housing Plans
1992	Same as 1989-2, adds ownership status of land & dwelling, asks for amount of telephone bill instead of presence of telephone, drops questions on owner as household member and in-kind rent
1993	Same as 1992 adds number of rooms occupied.
1994	Same as 1993
1995	Same as 1993
1996	Same as 1993
1997	Same as 1993, adds question on amount spent on maintenance, minor repairs
1998	Same as 1997
1999	Same as 1998, drops question on amount spent on maintenance and amount dwelling could be rented for
2000	Same as 1999, plus questions on garbage disposal and rats

2.1.14 Inventory of Durable Goods

The household is asked if it owns any of 15 durable goods: sewing machines, gas stoves, refrigerators, air conditioners, fans, radios, cassette players, phonographs, stereo equipment, tv sets, VCRs, satellite dishes, bicycles, motorcycles, cars or other vehicles. Later years collect information on the year acquired, amount paid, and current resale value for each good owned in all of the categories.

Table 14. Content of the JSLC Durable Goods Module

	Inventory of Durable Goods
1988	Sewing machines, gas stoves, refrigerators, air conditioners, fans, radios, cassette players, phonographs, stereo equipment, tv sets, VCRs, satellite dishes, bicycles, motorcycles, cars or other vehicles. Notes only ownership, no acquisition or current values.
1989-1	Adds year good acquired, value when acquired and current value for all items in each category, electric stoves, video equipment, washing machine, cameras; separates Black & White TV Sets and Color TV Sets; drops satellite dish
1989-2	Same as 1989-1 Drops cameras, Combines TV Sets
1990	Same as 1989-2
1991	Same as 1989-2 Dollars and cents noted separately
1992	Same as 1991
1993	Same as 1991
1994	Same as 1991
1995	Same as 1991
1996	Same as 1991
1997	Same as 1991
1998	Same as 1991
1999	Same as 1991, add question on computer/printer/fax
2000	Same as 1999

2.1.15 Miscellaneous Income

The value of all miscellaneous income received by household members during the past twelve months is noted. Income sources include: remittances from relatives or friends that live abroad, rental payments for land or property, social security and other pensions, interest from loans.

Table 15. Content of the JSLC Miscellaneous Income Module

	Miscellaneous Income
1988	(Covered in questions in the Housing section)
1989-1	Includes building certificates to repair Hurricane Gilbert damage, agricultural stamps for farm inputs in order to cope with damage caused by Hurricane Gilbert, Food stamps for losses due to Hurricane Gilbert.
1989-2	Includes Support for children from non-resident parents, Income from other relatives or friends in Jamaica, separate social security and other pension funds. Drops Hurricane Gilbert questions.
1990	Same as 1989-2 and adds question on receipt of Poor Relief.
1991	Same as 1990 Dollars and cents noted separately.
1992	Same as 1991 Plus four additional modules: Loans payable to household, loans payable by household, purchase and sale of land and financial assets.
1993	Same as 1991
1994	Same as 1991
1995	Same as 1991
1996	Same as 1991
1997	Same as 1991. Adds items for dividends, windfall receipts, and value of all income received by household members in cash or in-kind during the past 12 months.
1998	Same as 1997
1999	Same as 1997
2000	Same as 1997

2.1.16 Food Stamps

The purpose of the Food Stamps module is to find out whether any household member receives food stamps and, if so, how much. Information regarding eligibility and application among those not currently receiving payments is also collected.

Table 16. Content of the JSLC Food Stamps Module

	Food Stamps
1988	(Receipt and value of food stamps is collected in Housing Section--Problem with value, see Section 5.2)
1989-1	Receipt, category of recipient and value of food stamps, reason for not receiving food stamps
1989-2	Adds questions on application
1990	Adds question on problems picking up food stamps
1991	Two modules: household and individual questions
1992	Same as 1991 but in three modules: household, recipients, applicants
1993	Same as 1992
1994	Same as 1992
1995	Same as 1992
1996	Reorganized: same questions and codes as 1992, but applies clearly to each individual rather than to household
1997	Applies to each individual - category for receiving food stamps, travel time and transportation to distribution center, items purchased with food stamps, value of food stamps, problems with receiving stamps, non-approved applications
1998	Same as 1997
1999	Same as 1997
2000	Same as 1997

2.1.17 Distance to Services

The distance that the household must travel, in miles and time, to the nearest health facilities, schools and social security office and the mode of transport taken are noted for each household. This module was discontinued after 1989. Starting in 1990, the information was collected in the other modules.

Table 17. Content of the JSLC Distance to Services Module

	Distance to Services
1988	None
1989-1	Distance in miles and travel time to health, schooling and social security services
1989-2	Adds distance to pharmacy, bus stop, post office and police station
1990	No separate module. (Distance to schools collected in housing module)
1991	No separate module. (Distance to community services collected in housing module)

2.1.18 Social Mobility

In the 1994 JSLC, a module was included to determine the characteristics of those responsible for each respondent when the respondent was 14 years old. Ten questions were asked regarding who was responsible, where the responsible person lived, what type of work the responsible person did, and how much education the responsible person had.

Table 18. Content of JSLC Social Mobility Module

	Social Mobility	Respondents
1994	Location, employment status, education of person responsible for respondent at 14 years of age	16 and older

2.1.19 Labor Force Activity

Individuals can be linked to the data from the Jamaican Labor Force Survey (see Section 5.4.2). Each member of the household older than 14 years of age is asked questions regarding his or her employment status. Employed persons (all persons who worked for pay or on family enterprises during the survey week and those that had jobs whether or not they worked during the survey week) are asked about hours worked, work experience, training, education, employment status and gross average income over the last twelve months. Unemployed persons (those who are not currently working but are looking for work and those wanting work who are prepared to accept work whether or not they were looking for work) are asked the duration of and reason for their unemployment, the job search, work experience, training, education, employment status, and income. Persons outside the labor force (full-time students, those not wanting to work anytime during the prior six months and those with home duties that would prevent them from taking a job) were asked about previous work experience, training, education, employment status, and income. Users should note that the LFS contains much less detail than the standard LSMS employment and job search modules and that the LFS income data are of dubious quality.

The 1993 JSLC contains a module designed to collect more detailed information from all respondents 14 years of age and older. The module was designed to: 1) determine how people spend their time; 2) assess the relative contribution of individual's activities to gross domestic product; 3) delineate household activities by gender; 4) gather more income data than is possible through the LFS; and 5) assess how much productive activity is unaccounted in the National Accounts.

The 1997 JSLC also includes a module on household employment and income (see Section 2.1.22) as part of its focus on the adequacy of income generated by employment in the household.

2.1.20 Aging

In the 1995 JSLC, a module was included to investigate issues related to aging. This module was administered to household members 60 years and older. The questions covered mental status, employment, financial support, and health status.

Table 19. Content of JSLC Aging Module

	Aging	Respondents
1995	Mental status, employment, financial support, health status, including ability to perform activities of daily living	60 and older

2.1.21 Child Fostering

In the 1996 JSLC, a module was included to study child fostering. A short series of questions on their mother's and father's age, education, residence and occupation were asked for children who were household members age 14 and younger. A roster of non-resident children age 14 and under was constructed. Similar questions, with more detail on transfers and children's schooling were asked.

Table 20. Content of JSLC Child Fostering Module

	Child Fostering	Respondents
1996	Mother's and father's age, education, residence, occupation, transfers children's education and guardianship, mother's and father's age, education, residence, occupation, transfers	household members 14 and younger non-residents 14 and younger

2.1.22 Employment and Earnings

In the 1997 JSLC, a module was included to get an in-depth picture of earnings in the country. This module is drafted based on the employment and earnings portion of the 1993 Time Use module that was found to be much better in its response for earnings data than other attempts including the Labour Force Surveys. The information collected includes details on the main occupation, allowances received in addition to or as part of salary, income, additional employment, information on the unemployed, and household enterprises.

Table 21. Content of JSLC Employment and Earnings Module

	Employment and Earnings	Respondents
1997	Main occupation, allowances received in addition to or as part of salary, income, additional employment, information on the unemployed, and household enterprises.	Household members 14 and older

2.1.23 Adequacy of Income

In the 1997 JSLC, a module was included to ascertain the household's view on the income that it received in the past year. One respondent per household was asked if the income was adequate, less than adequate or more than adequate for the household's needs. If the income was less than adequate the respondent was asked the strategies used to meet the household's needs. If the income was more than adequate, the respondent was asked what was done with the excess income.

Table 22. Content of JSLC Adequacy of Income Module

	Adequacy of Income
1997	Adequacy of income. Where less than adequate - strategies used augment income, total amount borrowed or obtained from selling possessions, areas in which spending was minimized. Where more than adequate - use of excess funds.

2.1.24 Savings

In the 1997 JSLC, a module was included to determine the savings habits of the households. The questions included how often the respondent saved, financial assets, and other assets.

Table 23. Content of JSLC Savings Module

	Savings	Respondents
1997	How often and how much saved, financial assets owned by the respondent, other assets owned by the family.	All household members 14 and older.

2.1.25 Money Borrowed

In the 1997 JSLC, a module was included on money borrowed by household members to provide indirect information on the financial difficulties being experienced by household members. Respondents were asked if they had borrowed money and if so, from where, the purpose of the loan, the rate of interest, the amount repaid during the last year, and the number and amount of missed payments.

Table 24. Content of JSLC Money Borrowed Module

	Money Borrowed	Respondents
1997	Borrowed money and if so, from where, the purpose of the loan, the rate of interest, the amount repaid during the last year, and the number and amount of missed payments	All household members

2.1.26 Money Lent

In the 1997 JSLC, a module was included on money lent by household members to complete the picture of disbursal of all disposable income. Respondents were asked if they had lent money to individuals, farms or businesses that had not been repaid, the amount lent, the amount due on the survey date and the repayment amounts (principal and interest).

Table 25. Content of JSLC Money Lent Module

	Money Lent
1997	Lent money to individuals, farms or businesses that had not been repaid, the amount lent, the amount due on the survey date and the repayment amounts (principal and interest).

2.1.27 Poverty and Coping Strategies

A module designed to capture coping strategies for poverty was included in the 1999 survey. The module includes information on occupational status, religious affiliation, social well being, community, perception of social status, transportation, and coping strategies for financial difficulties, children in school, national poverty eradication programs, and emotional difficulties.

2.2 Health Services Questionnaire

A survey of health facilities was carried out in September 1990 to complement the expanded health module of the 1989-2 JSLC. Using a Ministry of Health census of health facilities, all public health facilities were surveyed. All private tertiary facilities (hospitals) were surveyed. From a sampling frame compiled from the Jamaican Medical Association and community health workers, a random sample of up to 15 private primary facilities from each parish (45 in the case of Kingston and St. Andrew parish considered together) were selected and surveyed.

Four separate health services questionnaires were used: public primary, private primary, public secondary/tertiary and private secondary/tertiary. Public primary health services were asked to describe their catchment area, facility characteristics, patient services, immunizations offered, personnel, beds, transportation, drug supply and equipment, family planning services, and maternal health services. The private primary health services questionnaire is very similar but there are some differences. The catchment area question is much less detailed, the laboratory services questions are more detailed. Wage ranges for personnel are collected in the private services questionnaire and there is an entire section devoted to patient flow, revenues and expenditures. The public secondary/tertiary health services questionnaire is similar to the private primary services questionnaire but asks a more detailed set of facility characteristics, personnel and equipment questions. Again, the private questionnaire includes questions on wages for personnel, revenues and expenditures.

In 1989-2 the household questionnaire asked, for each individual in the household, if he or she had been ill during the previous four weeks, and, if so, if a health professional had been contacted. The name of the first facility visited was noted as well as whether it was a public

hospital, a private hospital, a public health center, a private health center, a private doctor's office, a private pharmacy, the patient's home or other. The name of the facility was coded. Linking individuals and households to these facilities is discussed in Section 5.4.

2.3 School Administrator and Teacher Questionnaires and Achievement Test Scores

The area of emphasis in the 1990 JSLC was education. In addition to the expanded education module in the household questionnaire, the 1990 JSLC included a survey of school administrators for each primary or secondary school attended by any member of the households that participated in the LFS and the JSLC. Up to ten randomly selected teachers from each school were also surveyed. Finally, all primary and secondary students identified as household members in the LFS and JSLC were to take an achievement test and the scores were recorded.

The school survey data, the CAT test administration and the Jamaican primary school system are described in more detail in Glewwe, et.al. (1993) listed in Appendix D. Note that this is not a national survey of schools. It is a survey of all schools attended by household members in the randomly-selected enumeration districts. Enumeration districts were selected to accurately reflect population distribution, not school distribution. Schools in areas with lower school/population ratios are expected to be over-sampled. The school data provide measurements of the quality of schooling facilities available to the sample of the population and they will not necessarily provide accurate measures of average school quality.

2.3.1 School Administrator Questionnaire

The school administrator is asked questions covering ten topics: General Information; Physical Characteristics and Facilities; School Feeding Program; Expenditures on Schooling; Instructional Materials and Guides; Instructional Time; Admission, Completion, Drop-Out and Repetition; Teachers and Parents; School Organization; and Communication. It is designed to be administered in all primary and secondary schools in Jamaica.

2.3.2 Teacher Questionnaire

In the Teacher Questionnaire, teachers were asked to describe their education, teacher training, experience, and work load. They were also asked to rate the quality of the textbooks used in their field, describe any in-service training received, and describe the breakdown of their total time and their classroom time across activities. Finally, the teachers were asked how often and why they missed class or arrived late. These questionnaires were filled out directly by the teachers rather than administered by an interviewer.

2.3.3 Achievement Test Scores

The California Achievement Test (CAT) tests of mathematics computation and reading comprehension were given to children in grades two through thirteen from the JSLC households. The children were traced to their schools, taken out of their classrooms and tested together. A "locator" or screening test was given to determine the level of the test battery appropriate to a given child, then selected tests (Math Computation and Reading Comprehension) from that level were administered.

The small household-based sample of children in primary school meant that no more than about 200 students could be expected in each grade. Thus a vertically equated test was required. Since there are no vertically equated Jamaican tests and there was no possibility of developing one within the scope of the JSLC, other tests commercially available in English were considered. Several options were reviewed with the Jamaican Ministry of Education. The CAT was selected on the grounds of technical quality and as providing the fewest apparent concerns over cultural biases. It has proven to be a valid and reliable instrument to use in studying variation in achievement among Jamaican school children (see Harris, 1993). Comparisons between Jamaican and US school children would be invalid due to differences in the conditions under which the test was administered.

The reading and computation scores are scaled so that they can be compared as if every child took the same test even though different tests were administered to students at different levels. In addition to the two scaled scores, age, sex, grade, student identification codes and an indicator of first or second test administration are included in the test score data set. Due to the difficulty in interpretation of test score data, access to this module is more restricted than it is to the other modules (see Appendix I).

3. SAMPLE

3.1 Design

The sample design used for the JSLC was derived from the Labor Force Survey. The LFS sampling strategy is a two stage stratified process designed to select approximately one and a half percent of the dwellings in Jamaica. In the first stage, enumeration districts are selected from a geographic frame. In the second, households are selected from the frame of dwellings in the enumeration district. The sample is self-weighted, that is each household in Jamaica is equally likely to be included in the survey sample.[9] From 1988 through 2000, there have been four versions of the LFS sample design which have been used as the basis of the JSLC sample.

[9] Self-weighting is a desirable characteristic of a sample because when a sample is self-weighted, sample averages can be taken to be representative of the population averages.

3.1.1 Labor Force Survey Sample Selection: First Stage - Selection of Enumeration Districts

All households in Jamaica are assigned to enumeration districts (EDs) for the Population Census. These EDs are used to form the Primary Sampling Unit (PSU) for the LFS sample. If an ED contained more than 80 dwellings it was designated as a single PSU. If an ED contained less than 80 dwellings, it was combined with contiguous EDs until there were at least 80 dwellings; these combined EDs were then designated as a single PSU. Using PSUs with at least 80 dwellings ensures that the dwellings selected in the second stage will come from a sufficiently large universe.

Contiguous PSUs are joined to form Sampling Regions (SRs). The PSUs are joined in such a way that each SR: (a) is wholly contained in one of Jamaica's fourteen parishes; (b) contains approximately the same number of dwellings; and (c) is composed of homogenous units. For example, an attempt is made to not mix urban and rural EDs in the same SR. Since there is an unequal distribution of dwellings per parish, the number of SRs varies from parish to parish.

Each SR contains approximately 20 PSUs. From each SR, two PSUs are selected with probability equal to the share of the sampling region's dwellings contained in that PSU. The formation of a large number of SRs and the selection of samples from each one ensures a more even distribution of the sample across all geographic and administrative areas. The sampling regions are updated at approximately four or five year intervals to account for population growth.

3.1.2 Labor Force Survey Sample Selection: Second Stage - Selection of Dwellings (1989-1992)

Within each of the PSUs selected from the master sample, a list of all dwellings was compiled by the field staff in house to house visits. From this list of all dwellings for each PSU, 36 dwellings were selected as a systematic sample with a random start. The selected dwellings were then divided into 12 panels. These panels were then rotated into the LFS quarterly survey in the following manner:

Table 26. Rotation of Household Panels into the LFS, 1989-1992

Survey	Included Panels
January	ABCDEF
April	DEFGHI
July	GHIJKL
October	ABC JKL

One half of these panels were selected for the first round of the LFS.[10] In each round, half of these panels were retained and half were replaced by unsurveyed panels. Those that had already been interviewed twice were dropped. Finally, in the fourth round, the most recently

[10] From 1968 to 1988 the Labor Force Survey rounds were semi-annual in April and October. Since the beginning of 1989, the survey has been conducted quarterly in January, April, July and October.

added panels were retained and the panels that were dropped after round 1 were included. Each dwelling was included in two successive quarterly rounds and the entire sample of dwellings is resurveyed in the same quarter in successive years. This panel rotation was designed to minimize respondent fatigue.

The "paired selection design," choosing two PSUs with probability equal to their relative size from each of the equal-sized sampling regions and then selecting an equal number of households from each PSU, ensures equal overall probability of selection for all dwellings and that the sample will be self-weighting.

3.1.3 Labor Force Survey Sample Selection: Stage Two - Selection of Dwellings (1993-1996)

In 1993, the master sample of dwellings for the LFS was revised based on dwellings data collected in the population census of 1991. This resulted in an increase in the number of sampling regions. The number of dwellings selected per PSU was reduced to 32 in order to keep the overall sample of dwellings at a manageable level. Dwellings were still selected as a systematic sample with a random start. The selected dwellings are divided into 8 panels which are rotated in the following manner:

Table 27. Rotation of Household Panels into the LFS, 1993-1996

Survey	Included Panels
April	ABCD
July	CDEF
October	EFGH
January	AB GH

Panels are repeated after one year and panels covered in alternate quarterly LFS are comprised of different dwellings, i.e. the April and October LFS cover different dwellings.

3.1.4 Labor Force Survey Sample Selection: Stage Two - Selection of Dwellings (1997-2000)

The master sample was again revised in 1996 and a new sample was selected of two EDs from each revised sampling region. The number of sampling regions was increased, but the number of dwellings selected per PSU remained at 32. Dwellings were selected as a systematic sample with a random start. The selected dwellings are divided in 8 panels which are rotated in the following manner:

Table 28. Rotation of Household Panels into the LFS, 1997-2000

Survey	Included Panels
January	ABCD
April	CDEF
July	EFGH
October	AB GH

Panels are repeated after one year and the panels covered in alternate quarterly LFS are comprised of different dwellings, i.e. the April and October LFS cover different dwellings. However, the EDs in all the quarterly LFS are the same.

3.1.5 The Survey of Living Conditions Sample

For the JSLC, a sub-sample of the SRs selected for the LFS is chosen randomly on a circular systematic basis with a random start. The households in the PSUs in each of those SRs that were sampled in the most recent LFS round are revisited with the JSLC questionnaire about one month following the LFS interview. The result is a smaller number of SRs but the same number of households in each SR. One-third of the LFS sample dwellings were covered in JSLC 1988, 1989-1, 1990, 1991, 1993, 1994, 1995, 1996, 1997, 1999, and 2000. Two-thirds of the LFS sample dwellings were covered in JSLC 1989-2. In JSLC 1992, 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.

The JSLC 1998 utilized all EDs of the April 1998 LFS, but the number of dwellings canvassed was not the same for all parishes. The intention was to try and secure a minimum of 400 questionnaires for each parish. All LFS sampling regions, two selected EDs from each region and a specially calculated number of dwellings from each ED covered in the April LFS were included in the sample. This results in a need for parish level weighting because of differences in the sampling fractions. A file of parish weights has been included in the data set (PARWGHTS).

3.1.6 The Health Facilities Sample

For the 1989-2 expanded health module, health facilities were surveyed in September 1990 in conjunction with the JSLC household survey. Using a Ministry of Health census of health facilities, all public health facilities were surveyed. All private tertiary facilities (hospitals) were surveyed. From a sampling frame compiled from the Jamaican Medical Association and community health workers, a random sample of up to 15 private primary facilities from each parish (45 in Kingston and St. Andrew parish together) were selected and surveyed. Only four parishes (St. Andrew, St. Catherine, Clarendon and Manchester) had more than 15 doctors. The sample of 45 doctors in Kingston and St. Andrew and 15 from each of the rest of the parishes were selected on a systematic sampling basis.

3.1.7 The School Sample

For each household in the 1990 JSLC, the school attended by each child in primary or secondary school was identified. These schools became the sample for the school survey. Every school on the list was to be included in the sample of schools. For each school there was to be

one school administrator questionnaire. Up to ten teachers randomly selected by the head of the school were to complete the teacher questionnaire. Achievement tests were administered to all respondents attending that school in grades 2 through 12 (first graders were not included).[11]

3.2 Implementation

The sample for the 1988 JSLC was based on a sampling frame selected in 1982 that included 208 Sampling Regions. The next five JSLCs (1989-1, 1989-2, 1990, 1991, 1992) adopted the sample drawn in 1988 for the 1989 LFS that included 217 SRs. The JSLC 1993 through 1996 adopted the sample design drawn in 1993 for the 1993 LFS that included 234 SRs. In 1996, the sampling frame was redesigned and this was used for the LFS in 1997 through 2000.

Table 29. Labor Force Survey Sample Selection

Year Sampling Frame Established	1982	1988	1993	1996
Labor Force Surveys	1983-1988	1989-1992	1993-1996	1997-2000
Sampling Regions Primary Sampling Units Selected Number of Dwellings/Primary Sampling Unit	208 416 20% (approx. 36)	217 434 36	234 468 32	239 478 32
Total number of Panels Number of Panels Surveyed in each Round	16 8	12 6	8 4	8 4
Number of Dwellings to be Surveyed in each Round	~7566 = (.2*HH*416)/2 where HH is the total number of dwellings in the PSUs	7812 = (434*36)/2	7488 = (468*32)/2	7648= (478*32)/2

An important distinction should be noted. In the 1982 sample, twenty percent of the dwellings were chosen from each primary sampling unit. Because the primary sampling units contain unequal numbers of dwellings, the self-weighted nature of the sample is compromised.[12] The sample chosen for Labor Force Surveys after 1988 avoids this error by selecting an equal number of dwellings from each primary sampling unit.

With only three exceptions, the JSLC surveys one-third of the labor force survey households. In 1989-2 two-thirds of the Labor Force Survey sample was used. In 1992 the focus of the JSLC was on poverty and the sample was considerably enlarged to provide the desired parish-level estimates of poverty with a reasonable degree of precision. All of the labor force survey households were surveyed in ten of the fourteen parishes and two-thirds of the households

[11] Though the children in the tested sample are not exactly like those in the rest of the sample, Glewwe, et.al. (1993) report that there is no major difference between the two groups with respect to age, sex, welfare level, type of school or geographic area.

[12] Recall, primary sampling units are selected with probability proportional to their size, in number of dwellings. To then select more dwellings from larger primary sampling units results in a higher probability of inclusion in the sample for dwellings in larger primary sampling units and spoils the self-weighting. Correcting factors are described in Section 5.3.1.

were surveyed in the remaining four parishes (Kingston, St. Andrew, St. Catherine, and Clarendon). Again in 1998, the sample was enlarged to better parish coverage. Sample sizes of each round are presented in the table below.

Table 30. JSLC Sample Selection

Round	JSLC Sample		Survey Date	Field Work	LFS Non-respondents	Planned # of Dwellings in Sample
	Fraction of LFS	LFS Sample				
1988	1/3	Jul 88	Aug 88	8/8/88 - 9/10/88	Excluded	2522
1989-1	1/3	Apr 89	Jun-Jul 88	6/6/89 - 8/10/89	Excluded	2592
1989-2	2/3	Oct 89	Nov-Dec 89	10/22/89 - 3/9/90*	Excluded	5184
1990	1/3	Oct 90	Nov-Dec 90	10/25/90 - 3/28/91**	Excluded	2592
1991	1/3	Oct 91	Nov-Dec 91	11/2/91 - 2/15/92	Included	2592
1992	All of 10 parishes, 2/3 of 4 parishes	Jul 92	Aug-Dec 92	8/5/92 - 3/13/93	Included	6237
1993	1/3	Oct 93	Nov 93	11/93-3/94	Included	2496
1994	1/3	Oct 94	Nov 94	11/94-1/95	Included	2496
1995	1/3	Apr 95	May 95	5/95-8/95	Included	2496
1996	1/3	Apr 96	May 96	5/96-8/96	Included	2496
1997	1/3	Apr 97	May 97	5/97-7/97	Included	2546
1998	All plus additional households	Apr 98	May 98	5/98-8/98	Included	9136
1999	1/3	Apr 99	May 99	5/99-7/99	Included	2560
2000	1/3	Apr 2000	May 2000	5/00-7/00	Included	2560

* Does not include administration of the health facilities survey.

** Does not include CAT administration.

From 1989-2 to 1991, the JSLC was based on the October round of the corresponding Labor Force Survey. Due to concern over respondent fatigue and the interference with the holidays, the 1992 JSLC was conducted in August and based on the July LFS households. In 1993 and 1994, the JSLC was again based on the October LFS. In 1995 through 2000, the period of field work was shifted so that data collection and processing would not be interrupted by Christmas and New Year, and the survey was based on the April LFS.

The sample of households used for the 1988, 89-1, 89-2 and 90 JSLC included only those households that participated in the LFS. In 1991 through 2000, the JSLC sample included all dwellings from the original listing regardless of their participation in the LFS. The difference affects the availability of LFS modules and the procedure to use in weighting for Non-Response. The LFS non-response rate is 15-19 percent due primarily to closed/not home. Therefore, some households that are contacted and participate in the JSLC will not have completed LFS modules. The calculation of weighting factors is discussed in Section 5.3 below.

4. ORGANIZATION OF THE SURVEY

4.1 Survey Management

The JSLC has been directed by the Survey of Living Conditions Steering Committee since March 1990. This committee formulates the long-term goals and considers major decisions about the survey. The Social and Manpower Planning Division of the Planning Institute of Jamaica (PIOJ) chairs this committee, and takes the lead in questionnaire design and coordination of data analysis. From year to year different institutions participate. The Surveys and Computer Systems Divisions in the Statistical Institute of Jamaica (STATIN) are responsible for sample design, field work, and data management. Representatives from the Ministries of Health, of Education and of Labour, Welfare and Sport, and from the faculty of the University of West Indies sit on the steering committee, participate in planning the special emphasis modules, and provide other input.

4.2 Training and Field Test

For every round of the JSLC, STATIN organizes training classes for all interviewers and supervisors.[13] The one-day sessions are given to field staff by statisticians from the Surveys Division with help from consultants and the local ministries on the administration of the anthropometrics and expanded modules.

The training manuals detail the interviewer's tasks, describe the questionnaire and provide concepts, definitions and instructions for each section. These manuals are available to researchers as listed in Appendix C.

The main purpose of the pre-test is to verify that the questions are framed in such a way as to be intelligible and unambiguous to the interviewer and to the respondent. For the first two rounds, 1988 and 1989-1, the survey was of a general nature and there was a certain amount of pre-testing.

The expanded health module and health institutions questionnaires in 1989-2 required special pre-testing. The new modules in the 1990 survey also required pre-testing. The pre-test concentrated on the administration of the CAT. All supervisors and interviewers were taken to a school and trained in the procedures of administering the test.

The 1991 survey pre-test had both an expanded housing module and a compressed consumption module. The pre-test consisted of administering the housing module to 15 households and the consumption module to another 15 households in one ED *in each of the 16*

[13] All interviewers are on the permanent staff, know general techniques and STATIN administrative practices, and have experience with the LFS and with prior rounds of the SLC survey.

supervisor zones. The results were not available before the beginning of the survey and the normal consumption module was adopted.

The 1992 round did not include any pre-test because the questionnaire included only a few consumption items that were not previously included and the survey field work was moved up from November to August, leaving no time to conduct the pre-test. The 1993-1996 JSLC pre-tests[14] were conducted in 16 EDs, one from each supervisor zone. Within each ED, the survey was administered to 15 households. Households covered in the LFS or the Contraceptive Prevalence Survey were not included in the pre-test. The pre-test was also an opportunity for interviewers to be briefed on the common errors committed in the previous rounds.

4.3 Organization of Fieldwork

The JSLC interviews are conducted between rounds of the LFS using STATIN personnel, computers, and vehicles. The STATIN household survey personnel include four senior supervisors, sixteen supervisors and eighty interviewers. For the JSLC, they are organized into sixteen teams of five interviewers and one supervisor each.

Four senior supervisors are located in Kingston, High Gate, Linstead and Black River (in the south, north, center and west of the country, respectively). Their responsibilities are largely administrative.

The supervisor is responsible for: 1) the review of each completed questionnaire for inconsistencies; 2) observation of some interviews; 3) field checks of some completed questionnaires; 4) verification of dwellings recorded as vacant or closed; 5) visiting non-responding households to encourage cooperation; and 6) taking the anthropometric measurements.[15]

Beginning with the 1989-2 JSLC, part of the rosters and questionnaire cover sections were filled in at the STATIN offices using data from the LFS. In 1988 each interviewer was to conduct nine interviews per week for the three weeks of the survey. In 1992 interviews were conducted at the rate of eight per week for eight weeks. Completed questionnaires were checked for consistency by the supervisor and by the senior supervisor before being sent for data entry.

Data entry is done in STATIN by its own data entry operators. For the first five rounds of the JSLC, the data entry was done by the same set of operators from the computer division who had a number of years of experience. For 1992 JSLC, the data entry started with two experienced operators and one new operator. The two experienced operators were subsequently promoted and were replaced by three new operators.

[14] No information is available on the pretests after 1997.
[15] For the 1988 survey, anthropometric measurements were taken by personnel from the Ministry of Health.

Because of a delay in completing the field work under the 1993 JSLC, an incentive scheme was introduced in 1994 which was effective in eliminating the delays. The investigations began by the middle of November and the cut-off date was prescribed as January 15. Only those questionnaires received on or before the cut-off date and which were accepted for analysis were eligible for the incentive. No separate incentive was given for completing the shortened item-by-item consumption modules. The incentive plan was used in 1995-1998 when investigations began in the middle of May and the cut off date was July 10.[16] A reduced incentive was paid in 1999 and 2000, and the funding for the incentive scheme for future surveys may be limited.

5. USING THE DATA

It is STRONGLY recommended that the researcher refer to the questionnaires when using the data. The questionnaires contain the exact wording of the questions and interviewer instructions. The interviewer was to read out only the things written in lower case, upper case print indicates instructions for the interviewer. For example, sometimes a list of possible responses was to be read to the respondent but more often the interviewer was simply to code the response given. Only by referring to the questionnaire can a researcher determine which was the case for any specific question.

The questionnaire is also useful in interpreting the codes. All codes, except the industry and occupation codes used in the LFS are contained in the questionnaire itself. The complete lists of five-digit industry codes and four-digit occupation codes are available as noted in Appendix C. The single digit lists that may be sufficient for general purposes are provided in Appendix G. For more details, see interviewer and supervisor manuals.

The *most important reason to consult the questionnaire* is that extensive use is made of *skip patterns*. This was desirable to maximize the ease with which the interview could be conducted and to include all questions that applied to a particular household or individual but exclude those that were not relevant to a particular respondent or household. The researcher must be aware of these skip patterns so that the data are properly interpreted. The skip patterns are, in most cases, clear. If there is no instruction the next question should be asked regardless of the response. An arrow followed by a number in parentheses (» 2) after a particular response indicates which question should be asked if that reply is given. This implies skipping over other questions. An arrow in a rectangle indicates which question to ask next regardless of the response. The skip codes are explained in detail in the Interviewer Manual. Copies of the questionnaires and the Interviewer Manuals are available from the World Bank, see Appendix C.

Note also that the questionnaires vary substantially in details from year to year. It is important to use the questionnaire corresponding to the data. The household data are available for all rounds, 1988-2000, in data sets that correspond to sections of the questionnaire. A complete list of data sets is provided in Appendix B. The data sets are available in SAS portable, STATA, and ASCII files. They are distributed in compressed form with the program necessary to decompress them. The SAS and STATA files contain variable labels for most variables. The

[16] Cut off date for 1997 and 1998 is “the middle of July.”

questionnaire is especially useful for interpreting the labor force employment (all years) and the expanded health (1989-2) and schooling (1990) modules because many variables are named only by section and question number.

The next section describes the quality of the data, the cleaning procedure and the resulting sample size. Section 5.2 identifies for the researcher specific issues that will be useful in using the data. Section 5.3 provides information on weighting factors necessary to restore the representativeness of the sample. Section 5.4 describes the procedure for linking households and individuals across modules of the survey. Section 5.5 discusses issues of comparability in the time series data and use of the panel data.

5.1 Data Quality

In general, the data are of good quality. The questionnaires are almost entirely pre-coded to eliminate the coding process, often a source of various types of error. However, the JSLC incorporated fewer quality assurance procedures, and there are more inconsistencies, than in some of the other LSMS data sets.[17] An exhaustive review of the quality of the data and supervision of the first six rounds of the JSLC was undertaken by the Statistical Institute of Jamaica in 1993. Five hundred questionnaires from each round were analyzed for fifty coding and consistency errors. The percent of error-free questionnaires was 85 percent in 1989-1 but fell to 69 percent by 1992. The average number of errors (out of 50 possibilities) on those questionnaires with errors was between 1.6 and 2.1 for all years. The education module was especially prone to errors. (This will be addressed below.)

The figures in Table 31 provide a measure of the degree to which consumption figures calculated from the JSLC data are consistent with those in the national accounts. The JSLC mean per capita consumption is almost 10 percent below the per capita private final consumption figure in the 1988 national accounts but the difference in subsequent years is well below 10 percent. Comparing the national accounts annual change and the JSLC between-survey change provides additional confidence in the JSLC figures. The magnitude of the JSLC change closely tracks the change in the national accounts.[18]

[17] The most marked departure from standard LSMS quality assurance procedures is the single-interview format which does not allow for follow-up on inconsistencies discovered during data entry. Field supervision levels were also lower; supervisors were not assigned specific fractions of interviews to observe nor were they assigned a set number of questionnaires to re-interview.

[18] The National Accounts information is no longer available after 1997.

Table 31. Comparison of Mean per capita Consumption: JSLC vs. National Accounts

	JSLC		NATIONAL ACCOUNTS					
			SERIES A			SERIES B		
YEAR	MEAN PER CAPITA CONS	BETWEEN SURVEY CHANGE (%)	PER CAPITA PRIVATE FINAL CONS	ANNUAL CHANGE (%)	JSLC/NA (%)	PER CAPITA PRIVATE FINAL CONS	ANNUAL CHANGE (%)	JSLC/NA (%)
1988	$4,700		$5,210		9.8	$5,210		
1989-1	5,581	18.7						
1989-2	6,304	13.0	6,568	26.1	4.2	6,568	26.1	4.2
1990	7,616	20.8	7,869	19.8	3.3	9,816	49.5	28.8
1991	10,384	36.3	11,092	41.0	6.8	14,130	43.9	36.1
1992	16,998	63.7	17,718	49.7	4.2	22,032	55.9	29.6
1993	23,408	37.7	23,684	33.7	1.2	34,026	54.4	45.4
1994	32,712	39.7	35,819	51.2	9.5	44,313	30.2	35.5
1995	35,522	8.6	48,461	35.3	36.4	59,006	33.2	66.1
1996	43,050	21.2	56,786	17.2	31.9	70,022	18.7	62.7
1997	58,598	36.2				78,424	11.9	33.8
1998	66,931	14.2						
1999	69,740	4.2						
2000	71,225	2.1						

Source: Series A, STATIN. Series B, Vanus James, consultant.

Note: The methodological detail in the original sources is insufficient to explain the differences in the two series of National Accounts information.

Table 32 summarizes the data issues pertinent to each year of the survey. Each issue is discussed in detail below.

Table 32. Summary of JSLC Data Issues

Issue	88	891	892	90	91	92	93	94	95	96	97	98	99	00
Data not cleaned using standard procedure	x	x												
LFS non-respondents excluded	x	x	x	x										
Unreliable anthropometric data	x													
Food Stamp Value	x													
Hurricane Gilbert effect on consumption		x	x											
Missing Values/999				x	x									
Missing Values/0					x									
Variable Name Changes					x	x	x	x						
Area Variable	x	x	x	x	x	x	x	x						
Grade vs. Form in years of completed schooling	x	x	x	x	x	x	x	x						
School code corrections				x										
Achievement Test Scores				x										
Monetary Values	x				x	x	x							
Weighting for incorrect sampling	x													
Weighting for non-response	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Weighting for parish/enumeration district sampling	x	x	x	x	x	x						x		

5.1.1 Data Cleaning and Sample Size

In Table 33, Column (2) shows the number of dwellings planned for the selected sample. Column (3) lists the number of dwellings located and contacted for the JSLC. Recall that for the 1988, 1989-1, 1989-2 and 1990 rounds, any dwelling in the JSLC sample that did not respond to the LFS was not contacted. Nevertheless, those dwellings are still a part of the sample upon which the survey (and its representativeness) is based. The non-response rates are displayed in Columns (4)-(7).

The cleaning process (after the questionnaires have left the field) has been standardized since 1989-2. Before data entry, the questionnaires are edited and coded, where necessary, by the Editors-Coders at STATIN. As described above, the number of questions that require coding in the office is intentionally kept very low. Clerical errors are removed, where possible, and checks are made for consistency using the data entry program. The area classification is then checked using a computer program.

The data are then "cleaned" through the identification of outliers by STATIN. This process is explained here. The consumption expenditure data are annualized.[19] For each household, four indicators are calculated: per capita annual household consumption expenditure, the percent of expenditure on food, the percent of expenditure on meals taken away from home, and the percent of expenditure on housing. Households are assigned into quintiles on the basis of their per capita household expenditure. Means and standard deviations for the four measures are calculated. Households that deviate more than two standard deviations from their quintile mean for any of the measures are identified. The number of households flagged for scrutiny is listed in Column (8).

The expenditure modules of these households are then scrutinized to determine if: 1) there are obvious mistakes in the coding or entry; 2) there are irreconcilable inconsistencies; or 3) the household simply appears to be an outlier. Corrections are made to the data for households in the first category--Column (9). Households in the second category are excluded--Column (10). Households in the third category are left in the data set as is. The number of households adopted for analysis (including those in the first and third categories just described) is listed in Column (11).

The percent of the dwellings in the total sample that are excluded for data inconsistencies is shown in parentheses next to the number excluded in Column (10). This percent must be

[19] Expenditures for which only one value is given are annualized by multiplying that value by 12 (for monthly figures) or 52 (for weekly figures) -- 365/30 and 365/7 were used for the 1992 JSLC. Expenditures for which a short period and a longer period amount are supplied, the annualized value is a straight average of the annualized value of the short period and the annualized value of the longer period (net of the short period). Note that this annualization procedure varies from the annualization used by the World Bank that relies only on the longer period unless it is missing or an obvious inconsistency is detected between the short and the long periods.

added to the total non-response when calculating the weights (raising factors) for non-response. Weighting the data is discussed below.[20]

Table 33. JSLC Planned and Final Sample Size

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	Sample		Non-Response Rate (%)				Data Cleaning			
	Planned	Comp.	Dwelling closed/ vacant	Refusal	Rejected in data cleaning	Total	Scrutinized	Corrected	Excluded	Adopted for Analysis
88	2522	1906				22.8				1906
89-1	2592	2006				22.6			1	2005
89-2	5184	3950	7	18		25	304	47	89 (2.2%)	3861
90	2592	1877	18.0	9.7	2.0	27.6	132	15	49 (2.6%)	1828
91	2592	1817	19.4	10.4	1.3	29.8	191	32	24 (1.3%)	1786
92	6237	4556	19.3	8.8	1.6	27.0	302	62	71 (1.6%)	4485
93	2496	1985	12.1	8.4	1.1	20.5	195	46	22 (1.1%)	1963
94	2496	1947	15.1	6.9	0.3	22.0	138	15	7 (0.4%)	1940
95	2496	1982	14.9	5.7	0.2	20.8	140	22	6 (0.3%)	1976
96	2496	1825	16.3	7.9	0.0	24.2	119	5	1 (0.0%)	1824
97	2546	2020	13.9	6.7	0.0	20.6	122	7	0 (0.0%)	2020
98	9136	7375	13.4	5.7	0.1	19.3	192	13	12 (0.2%)	7375
99	2560	1879	15.3	10.5	0.4	26.7	52	18	3 (0.2%)	1876
00	2560	1804	20.5	9.0	0.2	29.7	76	12	4 (0.2%)	1800

Tables 34 and 35 provides sample sizes of the JSLC data sets that are available.

Table 34. JSLC Final Sample Size

Year	Households	Individuals	Children age 14 and under	Children under age 6	EXP##	NUTR*
1988	1909	7996	2871	1107	1863	
1989-1	2005	8756	3169	1224	1984	877
1989-2	3937	16642	5900	2303	3836	1611
1990	1828	7483	2619	1018	1821	644
1991	1786	7196	2458	941	1804	511
1992	4485	18250	6750	2456	4540	1294
1993	1963	7546	2668	1288	1958	739
1994	1940	7356	2551	1205	1942	765
1995	1976	7818	2757	1303	1976	802
1996	1823	7249	2575	1238	1823	754
1997	2020	7434	2576	1026	2020	753
1998	7375	27263	9193	3691	7375	2613
1999	1876	6792	2274	1040	1876	613
2000	1800	6441	2144	862	1800	578

* Data set name is NUTR in 1989-1992, ANTHROnn in 1993-1998, and NUTRnn after 1999 where "nn" is the year of the data.

[20] The researcher should note that these corrections were only made to the data set modules used to create the Jamaican consumption aggregates. Records for excluded households will remain in the other modules.

Table 35. JSLC Final Sample Size for Specialized Surveys

Survey	1989-2	1990	1994
Public Primary Health Services	366		
Private Primary Health Services	189		
Public Secondary/Tertiary Health Services	24		
Private Secondary/Tertiary Health Services	8		
School Administrator Questionnaires		322	
Teacher Questionnaires		2838	
Achievement Test Scores		1049	
Point of Purchase			1248[a]
Shortened Item by Item Consumption			1248[b]

[a] Same households in which the standard consumption modules were used (see Appendix J for more details).

[b] Separate sample of households (see Appendix J for more details).

5.2 General Data Issues

Other issues that the researcher must be aware of include the following: Unreliable Anthropometric Data, Food Stamp Value, Hurricane Gilbert, Missing Values/999, Missing Values/0, Variable Name Changes, Monetary Values, Area Variable, Grade vs. Form in Years of Completed Schooling, School Code Correction, and Achievement Test Scores Dates. These are explained in this section.

5.2.1 Unreliable Anthropometric Data in 1988

The anthropometric data in the 1988 JSLC have been found to be unreliable. Some of the measurements were made in kilograms, while others were made in pounds. While, it is possible to identify and correct some obvious outliers, there is no way to be certain to have identified all children measured in kilograms. Furthermore, the prevalence of malnutrition for weight-for-height, height-for-age, and weight-for-age measures appear inconsistent, indicating that the attempted "corrections" were not correct. The immunization data may be useful but the anthropometric measurements should not be used.

5.2.2 Food Stamp Value in 1988

The 1988 JSLC asks two questions on food stamps in the Housing Module: Question 35 asks "Does somebody in this household get food stamps?" and Question 36 asks "How much did you receive in food stamps last month?" There is no problem with the answers to the first question. However, because food stamps in Jamaica are distributed in two-month allotments, a family may answer zero to question 36 when, in fact, they had received food stamps for that month in the prior month.

5.2.3 Hurricane Gilbert

Hurricane Gilbert, the most severe in the island's history, hit Jamaica in September 1988. This was shortly after the field work was completed for the 1988 JSLC. The household expenditure, consumption and income during the period of recovery from the storm damage will fall within the recall period for both the 1989-1 and 1989-2 JSLC rounds. Consumption patterns may be somewhat unusual due to purchases made in response to hurricane damage. For example, expenditure on home repairs is likely to be higher than normal in 1989. Three extra categories of hurricane relief were included in the Miscellaneous Income section in 1989-1. The July 1989 STATIN/PIOJ Abstract reports that overall consumption data appear to have not been unduly affected by the aftermath of Gilbert. However, the November, 1989 PIOJ Abstract reports that the portion of expenditure devoted to food was substantially higher in the 1989-2 data and postulates that this reflects the decrease in home-grown food available for consumption in the latter part of 1989.

5.2.4 Missing Values/999

When no response is given to a question the corresponding entry in the data set should be missing. Unfortunately, for several modules, especially in 1990, missing values were entered as 9, 99, 888888, 999999, etc. An attempt has been made to rectify this problem and, where possible, to replace the 999 value with a missing value. Nevertheless, the researcher must be aware of the potential problem. This is especially important in the expenditure modules where there are several values for each variable. If 999 values are not dealt with systematically, then aggregate expenditure variables may be quite wrong and yet not necessarily appear to be outliers.

5.2.5 Missing Values/0

In 1991, non-responses for the value of durable goods were coded with 0. The problem is evident when the percent of missing acquisition values and values of zero are compared across surveys.

Table 36. Extent of JSLC Missing Values/0 Data Problem

Survey Year	Households Surveyed	Households with Durable Goods Modules	Percent of Acquisition Values Missing	Percent of Acquisition Values Equal to 0
1989-2	3941	3148 (75%)	24%	
1990	1828	1454 (74%)	21%	8%
1991	1786	1378 (70%)	2%	21%

The labor force module data set often includes a zero value for missing data. This differs from the procedure used throughout the other modules and will cause confusion in the interpretation and use of the data if it is not taken into account.

5.2.6 Variable Name Changes

The pattern of variable names used through 1990 follows very closely the naming of variables used in other LSMS data sets. Beginning in 1991 when the variable labeling was done in Jamaica, names were completely changed. The most important changes are in the dwelling and individual identification numbers. These changes are listed below:

Table 37. JSLC Variable Names Before and Since 1991

Through 1990	1991-1993	1994-2000
CID	RECORD	RECORD
HID	SERIAL	SERIAL
PID	INDIV	IND
PARISH	PARISH	PARISH
CONSTIT	CONST	CONST
ENUMDIS	DISTRICT	DISTRICT
DWELL	DWELLING	DWELLING
HHLD	HH	HH
HHEXPCD	ITEM_CD	ITEM_CD

5.2.7 Area Variable

AREA is a variable that locates the household in one of three areas: 1) the Kingston Metropolitan Area (KMA), 2) Other Towns and 3) Rural Areas. The classification method used in 1988 and 1989-1 differs from that used in later rounds: after 1989-2, Spanish Town and Portmore were included in KMA. Early versions of the survey information data sets in 1990 and 1991 (COVER and REC001, respectively) contained a variable named AREA and a variable named NEWAREA. Neither is completely correct but in most years, NEWAREA is correct in most households, see Appendix G.

The cover data sets that are now available contain only two area variables, OLDAREA and AREA. AREA is the variable based on comprehensive area assignments provided by STATIN and is the variable that should be used.

5.2.8 Grade vs. Form in Years of Completed Schooling

In the Jamaican school system, years in school are counted up through primary school, from grade 1 to grade 6, and then through secondary school, from Form 1 to Form 5 (grades 7-11), Form 6 Lower (grade 12) and Form 6 Upper (grade 13). From 1991 on the questionnaire includes a note to interviewers to translate the response to a number of grades completed from 1 to 13. But there was no such note in the earlier questionnaires and age/years of schooling completed discrepancies are common. If the respondent reports some secondary schooling and the years of schooling completed is less than 7, then add 6 to obtain the correct years of schooling

completed. For individuals age 14 and over, years of primary schooling, years of secondary schooling and highest examination passed are also collected on the Labor Force Survey.

Wording of the school grade attendance and completion questions is not consistent through all rounds of the survey. The researcher will want to be careful to distinguish between current grade and grade last completed (current grade minus one). Also, in 1989-1 the survey was conducted unexpectedly outside of the school year. The reference period for some questions about schooling is therefore ambiguous.

5.2.9 School Code Correction

There are several errors in the school codes assigned to schools listed in the 1990 household data sets. In order to correctly match the households and household members to the schools in the Administrator and Teacher data sets, the school code corrections listed in Appendix E must be used. There are eleven school code variables in nine Section B data sets for 1990. Some corrections also need to be made in the ADMIN and TEACHER data sets.

The correct school codes are six or seven digits long. The first two digits represent the Parish number and range from 1 to 14. The next three digits are the school code. The final two digits represent the type of school: 00 for public schools and 40 for private schools.

5.2.10 Achievement Test Scores

Of the approximately 1000 students who took the achievement test, three quarters were tested in March 1991. Later, a list of students who were missed was compiled and the test was given to some of those students in September 1991. Even after the second test administration, the time lapse and chronically low attendance resulted in test scores for only about one-half of the students that should have been tested (all students currently in grades 2-13).

The data set includes variables recording whether the student took the first or second test so identifying the students in each group is straightforward. It is important to control for the timing of the test. When comparing students in the same grade at the time of the SLC, those who took the test at the second sitting, in September, would be expected to score higher than those who took the test in March because of the additional schooling. However, when comparing students in the same grade at the time of the test, students in the second sitting would be expected to do less well since they are in the beginning, rather than well through, the school year.

5.2.11 Monetary Values

Throughout the questionnaire households and individuals are asked to provide monetary values: the amount paid for health services, the cost of medicine, value of food stamps received, and amount spent. Monetary values in most of the 1988 JSLC were entered with no decimal

point. The value given is the number of cents, rather than the number of Jamaican dollars, spent. To calculate the number of dollars all amounts must be divided by 100. This is true for the monetary values in modules F03, F06, F07, F08, F09, and F10.

For JSLC 1989-1 to 1990, the answers are coded into a single variable that includes dollars and cents, e.g. 4.25. In the 1991 and 1992 data sets, each monetary value is coded into two integer variables, one for the dollars and one for the cents, e.g. 4 and 25. The number of dollars spent equals (amount1 + amount2/100). In 1993, the dollars and cents were provided as separate variables and were concatenated to derive the value for the item. In 1994 through 1998, the dollars and cents were treated as one numeric variable.

5.3 Weighting Factors

The JSLC sample was designed to be self-weighting. A self-weighting sample is desirable because then sample statistics can be taken to be representative of the population without any adjustment. However, each year of the JSLC data requires the application of weights (also called raising factors) to restore the representativeness of the sample.[21] Three separate weights are discussed below. The first is applicable only to the 1988 data and corrects for the number of dwellings selected from each enumeration district (see Section 3.2 above). The second corrects for the inequality of non-response across enumeration districts and is applicable to all years. The third weighting factor corrects for distortions introduced in the selection of the JSLC sub-sample from the LFS master sample. This factor applies to the years from 1988 to 1992.

5.3.1 Weighting for Sample Selection Error in 1988

The 1988 JSLC sample is not self-weighting, that is all dwellings in Jamaica were not equally likely to be represented in the sample. The sample design called for an equal number of dwellings to be selected from each primary sampling unit selected in the first stage. Instead, an equal percent of dwellings were selected and large primary sampling units were over-represented, as discussed in Section 3.2 above.

In order to analyze the data and produce accurate representations of the population, the observations must be weighted. Households in large primary sampling units that are over-represented are assigned weights less than one. The weights should be calculated for each primary sampling unit using the following formula:

$$\text{weight}_s = 18 \div \#\text{ of dwellings selected in primary sampling unit (including non-responses)}$$

[21] The importance of the weights will depend on the nature of analysis that is performed with the data. Accurate countrywide and regional summary statistics may be significantly affected by the weighting. On the other hand, multivariate analysis is usually not as sensitive to small deviations in weighting.

$Weight_s$ calculated for each parish/constituency/enumeration district are included in F01 module for 1988.

5.3.2 Weighting for Non-response

After 1988, the dwellings for the JSLC surveys were selected in a way that resulted in a self-weighting sample. However, non-response rates that vary across enumeration districts invalidate the self-weighting nature of the sample. The high non-response rates experienced in the JSLC cause special concern. In general, the households in enumeration districts with higher non-response rates need to be weighted more heavily than households in enumeration districts with low-non-response rates to restore the respresentativeness of the sample. (The implicit assumption made is that the non-responding households within an enumeration district have similar characteristics on average to the responding households.) The weights used for 1988 through 1992 were calculated using the following formula:

$$weight_n = 18 \div \text{Number of responding dwellings in the Enumeration District}$$

For 1993 through 2000, the formula was changed, reflecting the change in the sample design, to:

$$weight_n = 16 \div \text{Number of responding dwellings in the Enumeration District}$$

The variable, EDWGHT, has been created and is available in the 1991, 1992 and 1994 through 2000 data sets of Survey Information.[22] It can be easily calculated for the other years.

5.3.3 Weighting for JSLC Sub-Sample Selection

For each JSLC, a sub-sample of the sampling regions used in the LFS was chosen. From 1988 to 1992, rather than select a fraction of the sampling regions nationwide, the fraction was applied within each parish. Due to the small number of sampling regions in some parishes, the rounding error was not insignificant. This error also distorts the representativeness of the sample. These weighting factors should be calculated for each household using the following formula:

$$weight_r = \text{Total number of LFS sampling regions in the parish} \div \text{number of sampling regions in the parish selected for the JSLC sub-sample}$$

This weight can be calculated using the numbers in Table 38. The number in the appropriate LFS column would be the numerator and the number in the appropriate JSLC column would be the denominator. This weight is especially important in 1992 because, as described in Section 3.2, the sample explicitly undersamples the four largest parishes. The 1992 REC001 data set already contains this weighting factor in the variable PARWGHT.

[22] See Appendix B for the data set names for each year.

From 1993 through 1997, the selection of sampling regions was done differently. The drawing was done from the nationwide list rather than from within each parish. Thus, the parish level sample weight is not required for the years 1993 through 1997. In 1998, different sampling fractions were applied to some of the parishes and a parish weight is again required. These weights are found in the data set PARWGHT. After 1999 the survey returned to the system used from 1993 through 1997.

Table 38. LFS and JSLC Sampling Regions by Parish 1988-1992

Parish	1988 LFS	1989-92 LFS	1988 JSLC	1989-1 JSLC	1989-2 JSLC	1990 JSLC	1991 JSLC	1992 JSLC
1 Kingston	11	11	4	4	8	4	4	7
2 St. Andrew	49	49	16	16	32	16	16	33
3 St. Thomas	8	9	3	3	6	3	3	9
4 Portland	8	8	3	3	6	3	3	8
5 St. Mary	11	11	4	4	8	4	4	11
6 St. Ann	11	13	4	4	8	4	4	13
7 Trelawny	7	7	2	2	4	2	2	7
8 St. James	13	14	4	5	10	5	5	14
9 Hanover	6	6	2	2	4	2	2	6
10 Westmoreland	12	13	4	4	8	4	4	13
11 St. Elizabeth	13	12	4	4	8	4	4	12
12 Manchester	12	13	4	4	8	4	4	13
13 Clarendon	18	19	6	6	12	6	6	13
14 St. Catherine	30	32	10	11	22	11	11	21
Jamaica	209	217	70	72	144	72	72	180

All three weighting factors should be applied to the 1988 data; each observation will be weighted with a factor equal to $weight_s \times weight_n \times weight_r$. For 1989-1 to 1992, $weight_s$ is equal to one and the weighting factor for each observation will be $weight_n \times weight_r$. After 1993 only $weight_n$ is required.

5.4 Linking Components of the Data

5.4.1 Linking Across Modules

The various modules of the household survey within any year can be linked for households using the household identification code: HID in the 1988-1990 surveys, and SERIAL in the 1991-2000 surveys. Individuals can be linked using the household identification code and the two digit personal identification code, PID in the 1988-1990 surveys, INDIV in the 1991-1993 surveys, and IND in the 1994-2000 surveys.[23]

[23] The code corresponding to INDIV is PERSON in the 1991 Anthropometric data set.

Individuals can be linked to their resident parents using the mother's and father's identification codes in the roster in 1989-1, 1989-2, 1990 and 1991. Starting with the 1989-2 survey, individuals can be linked with their resident partner using the partner's identification code in the roster: PARTID, in the 1989-2 and 1990 surveys, and PART_ID in the 1991-2000 surveys.

5.4.2 Linking the JSLC to the Labor Force Survey

In order to link households in the JSLC survey to households in the LFS, a 13 digit id code must be constructed by concatenating the five variables from the cover of the household survey[24]:

HHID = PARISH×100,000,000,000 + CONSTIT×1,000,000,000 + ENUMDIS×100,000 + DWELL×100 + HHLD

This id code must be constructed for both the household and the labor force modules.[25] To match individuals the files must be merged using the 13 digit household id code and the two digit personal id code, PID.

Though the merge is direct in theory, several complications arise in practice. The first is that because LFS non-respondents were included in the JSLC sample in 1991-1999[26], there are some JSLC households that have no Labor Force module. The second complication applies to all years and that is that the survey sample is based on dwellings and not households. The household surveyed in the JSLC may not correspond to the household surveyed in the LFS at the same dwelling. The third complication is that the PID in the LFS may not correspond to the PID in the JSLC. Another complication occurs when applying the age criteria. The LFS includes only those 14 years of age or older. Between the admininstration of the LFS and the SLC, people could have had birthdays that would appear to make them eligible for the LFS, but which they did not complete. In addition, some individuals could have "bad" birthdate or age information.

Dealing with the first complication is straightforward, some JSLC households will simply have to be excluded when using data from the labor force module. Dealing with the other complications requires a great deal of individual judgement. After merging, the age and sex of household members can be compared to determine if the household has been replaced and if the household members were interviewed in a different order between the two rounds.

To this end a variable has been added to the 1989-1 and 1989-2 Labor Force modules. PIDSLC corresponds to the PID in the household modules and PIDLFS corresponds to the PID in the LFS module. Table 39 describes the results of merging the SLC with the LFS data for both households and individuals for each year. The merges described were simply straight merges on

[24] The variables names for parish, constituency, enumereration district, dwelling and household number within dwelling may change, see Table 37.

[25] STATA users will have to use the statements "gen double hhid=..." and "format hhid %13.0f" to handle the 13 digit integer. Alternatively, data sets can be sorted and merged on all five variables.

[26] As of the writing of this document, the Labor Force Survey data for 2000 were not available to the World Bank.

the parish/consti/enumdis/dwell/hhld, HID, and PID variables, using the PIDSLC where available in the LFS data sets.

The researcher should note that the variables in the labor force data set often assume a value of 0 if they are missing *or* if the question was skipped for the individual. This is not true for the variables in the other JSLC data sets.

Table 39. Linking Dwellings and Households in the JSLC and LFS

	Households			Individuals		
Year	JSLC	LFS	BOTH	JSLC	LFS	BOTH
1988	1909	2614	1771	7996	9029	7013
1989-1	2005	1893	1784	8756	7612	7102
1989-2	3937	3837	3804	16642	15353	15235
1990	1828	2616	1802	7483	8860	7108
1991	1786	1722	1722	7196	6750	6726
1992	4485	5510	3940	18250	13576	10471
1993	1963	2506	1877	7546	8248	6931
1994	1940	2491	1856	7356	8065	6755
1995	1976	2598	1955	7818	13887	6995
1996	1823	2513	1749	7249	8280	6677
1997	2020	2576	1922	7434	8082	6852
1998	7375	7666	5173	27300	23702	18373
1999	1876	2586	1801	6792	7756	6246
2000	1800			6441		

Note: Counts represent matches of household and person IDs without restrictions of age.
As of the writing of this document, the World Bank did not have access to the LFS data for 2000.

5.4.3 Linking Households to the Health Services Data

The 1989-2 Health Facilities Survey data are contained in five data sets: PRVPRM, PUBPRM, PRVSEC1, PRVSEC2, and PUBSEC. The health facilities in each data set are identified with a four or five digit code, FACILITY. The first one or two digits represent the parish number (1 to 14), the third digit represents the type of facility (1-private primary, 2-public primary, 3-private secondary and 4-public secondary), the last two digits are the facility number.

In the household survey the variable ISTHLF in data set SECTB1 contains the code of the last health facility visited, if any, by any individual who reported an illness or injury within the last four weeks. ISTHLF is a three or four digit number. Again, the first one or two digits represent the parish number and the last two digits represent the facility number.

Unfortunately, the two sets of codes were compiled from different master lists. In order to link the individuals and households with the facilities in the health facilities survey, a mapping data set has been created. This data set, HLTCODES is an ASCII file included with the 1989-2 data sets. The data set HLTCODES includes the name of the parish, the name of the facility, the type of the facility, a first health facility code, a facility type, and a second health facility code. The first of the two health codes corresponds to ISTHLF and the second to FACILITY.

This is not a complete mapping. Private facilities were not included in the list used to assign codes during the household survey so households and individuals can only be linked to private facilities via parish/enumeration districts/constituency numbers. In some cases, the most recently visited facility was a dental clinic. Dental clinics were not included in the health facility survey so it is not possible to make any link for these individuals. The ASCII data set contains codes in the form 01-68 or 02-201 that would correspond to 168 and 2201, respectively and may therefore require some preliminary editing before creating a SAS or STATA data set.

5.4.4 Linking Households to the Administrator and Teacher Data

In the 1990 JSLC each individual under the age of 25 who had attended school and all individuals attending school at the time of the survey were asked the name of the schools that they were currently attending and the names of those they had attended in the past. Schools were assigned codes and these codes were to be used in the household, school administrator and teacher surveys.

The school codes are six or seven digits long. The first one or two digits represent the parish (1-14), the next three digits are the school code and the final two digits represent the type of school (00-public, 40-private).

Many of the school codes reported in the education sections of the household survey are invalid. Appendix E provides a list of corrections compiled by researchers at the World Bank. Note that there are eleven school code variables in nine sections of the household survey, listed in Table 40 and SCH in ADMIN and TEACHER, that need to be corrected.

Table 40. School Codes in the 1990 JSLC Data Sets

Data Set	Variable	School	Category of Individual
SECTB2A SECTB2B	SB2Q05 SB2Q08	Last primary school attended First primary school attended	Persons no longer in school with primary education only
SECTB3A SECTB3B SECTB3D	SB3Q07 SB3Q11 SB3Q22	Last secondary school attended First school attended after grade 6 Last primary school attended	Persons no longer in school with secondary education only
SECTB4A	SB4Q02 SB4Q05	Current primary school First primary school attended	Persons still in primary school
SECTB5A SECTB5C	SB5Q02 SB5Q06 SB5Q17	Current Secondary school First school attended after grade 6 Last primary school attended	Persons presently enrolled in secondary school
SECTB6B	SB6Q13	Last secondary school attended	Persons still in post-secondary school
ADMIN TEACHER	SCH SCH		

5.4.5 Linking Students to the Test Score Data

As part of the 1990 JSLC emphasis on education, all household members currently attending school in grades 2 through 13 were to participate in the achievement test administered at the schools. The scaled results of the reading and computational tests are contained in the data set CATSTU. Students can be uniquely identified in CATSTU using the PARISH, CONSTIT, ENUMDIS, DWELL, HHLD and PID variables that correspond to the variables of the same name in the household cover and roster modules. Without any modification 867 of the 1049 students can be linked to individuals in the household roster.

5.5 Comparability in the Time Series Data, Use of Panel Data

5.5.1 Linking Households and Individuals Across Survey Rounds

The accumulation of time series data affords an opportunity to measure changes in aggregate values. However, small differences in the number and types of questions asked and variations in the procedure used to clean the data and weight for non-response need to be taken into consideration when comparing aggregate numbers from one survey round to the next. Comparison of 1988 consumption aggregates with those of later years is less robust than comparisons between later years due to differences in sampling, data cleaning and aggregation technique.

Dwellings can be matched across years using the id code described in the section on linking to the Labor Force Survey above. A 13 digit id code is constructed by concatenating the five variables on the cover of the survey[27]:

HHID = PARISH×100,000,000,000 + CONSTIT×1,000,000,000 + ENUMDIS×100,000 + DWELL×100 + HHLD

Table 41 presents the potential for linking dwellings across survey years. The 1988 survey has very few dwellings in common with any of the other surveys because the later surveys are based on revised master samples. There are also few dwellings common to 1989-1 and later surveys because the former is based on the April Labor Force Survey sample and the latter on the October Labor Force Survey samples in corresponding years. Thirty-eight percent of the 1989-2 dwellings were surveyed in 1990 and 37 percent were surveyed in 1991, and 81 percent of the 1990 dwellings were surveyed in 1991. The master sample was revised in 1989 and again following the 1991 census. The samples for 1993-1996 were drawn from this revised master sample and therefore do not have any connection with prior years. The 1995 sample, although drawn from the same master sample as 1993 and 1994, does not match to the earlier years. This is because the sample dwellings for 1995 were a subset of the April 1995 LFS, and the sample of dwellings for 1993 and 1994 were subsets of the corresponding October LFS. The master sample

[27] Variable names for parish, constituency, enumeration district, dwelling number and household number within dwelling may change, see Table 29.

was revised again in 1996 and used for the first time with the January 1997 LFS. The samples for the 1997 through 2000 SLCs were drawn from the April LFS, respectively.

Table 41a. Number of Dwellings That Can Be Matched Between Survey Years for 1988-1996

JSLC Year	1988	1989-1	1989-2	1990	1991	1992	1993	1994	1995	1996
1988	1909	2	14	5	6	11				
1989-1		2005	3	3	2	583				
1989-2			3937	1508	1444	1206				
1990				1828	1473	537				
1991					1786	518				
1992						4485				
1993							1963	1649		
1994								1940		
1995									1976	1505
1996										1824

Notes: 1988 JSLC based on the 1983 master sample.
1989-1992 surveys based on the 1988 master sample.
1993-1996 surveys based on the 1993 master sample.

Table 41b. Number of Dwellings That Can Be Matched Between Survey Years for 1997-2000

JSLC Year	1997	1998	1999	2000
1997	2020	1549	1571	1504
1998		7375	1490	1387
1999			1876	1498
2000				1800

Notes: 1997-2000 surveys based on the 1996 master sample.

Three survey years, 1989-2, 1990, and 1991, can be used as panel data. The JSLC samples from these years are all based on the October survey of the 1989 Labor Force master sample. The 1989-2 sample is twice as large as normal--two-thirds rather than one-third of the Labor Force Survey sample. The 1990 and 1991 samples are only one-third samples. So the matching starts with 50 percent of the 1989-2 sample. Of these 19 percent are lost due to non-response in 1990 and 17 percent additional in 1991. The resulting three year panel can be expected to include about 1236 dwellings as shown in Table 42.

Table 42. Three Year Panel of JSLC Dwellings

Survey Year	Dwellings	1989-2 to 1990 Match	1989-2, 1990, 1991 Match
1989-2	3937		
1990	1828	1485 (81% of the 1990 Sample)	
1991	1786		1236 (70% of 1991 Sample)

Note that this is a link of dwellings, not households. The questionnaire does not include questions about prior-year participation because the panel nature of the survey was not appreciated at the time of the questionnaire design. Verification that a matched household has been found must be done manually using judgements on household composition. A complete verification of the match for households has not been attempted. Preliminary work indicated that

one might expect to be able to match approximately 50 percent, 700 households, if the hours were invested in hand-matching the households. Linking individuals would also require a significant amount of manual verification because PID codes were not necessarily maintained across years.

A two year panel for 1993 and 1994 could similarly be constructed based on the dwelling numbers, since the sample dwellings were identical in the two years. No matched panel has been constructed for placement in the public domain.

In 1996, the dwellings sampled were again identical to those sampled in 1995. In this case STATIN changed both the questionnaire and clerical procedures to facilitate the matching of the panel. The 1996 cover page has a blank for the 1995 serial number. Similarly, the 1996 roster has a column where the person number on the 1995 questionnaire was recorded after both surveys were complete. Match rates with these procedures were much higher than in the attempts to link other panels matched on the data sets without recourse to the questionnaires, as shown in the table below.

Table 43. Households of JSLC 96 classified according to their linking with JSLC 95

Type	No. of households		No. of household members	
	Number	% of total	Total Members	Number Linked to JSLC 95
Households linked to JSLC 95	1,505	82.5	5,989	5,173
New households in JSLC 96	133	7.3	425	--
Non-response in JSLC 95	186	10.2	590	--
Total	1,824	100.0	7,004	5,173

When the master sample is the same for two successive years, the households in the two successive years of SLCs are usually identical because they are a subset of the same LFS. In the 1998 through 2000 surveys, the questionnaires contain a blank for the serial number for the previous SLC and the roster contains the person ID number from the previous year. The previous year serial numbers are not provided in the data set, however. The matches presented in Table 41b are based on the HHID variable (see Section 5.4.2). For more information, users should contact PIOJ (see Appendix A).

6. CONSTRUCTED DATA SETS

Researchers at the World Bank have created several data sets that combine various sections of the questionnaires in ways they have found to be especially useful. To increase the facility with which the data can be used by other researchers, these data sets are being made available with the raw data sets. These constructed data sets are made available for general use with the understanding that the description given in this document is the only documentation that will be provided. Any manipulation of the data requires that assumptions be made and, to the

extent possible, those assumptions are explained below. Except where noted, the data sets have been created using only the raw data sets. A researcher could construct similar data sets incorporating different assumptions.[28]

6.1 Consumption Aggregates, EXP##

Household consumption and expenditure on food, non-food, housing and other items are collected throughout all modules of the JSLC questionnaire. These variables have been annualized and aggregated into expenditure groups. Use value of durable goods and rental value of housing have been estimated. The result is a total expenditure and a per capita expenditure variable for each household. Each group and the totals are contained in the data sets EXP88, EXP89_1, EXP89_2, EXP90, EXP91, EXP92, EXP93, EXP94, EXP95, EXP96, EXP97, EXP98, EXP99 and EXP00.

Table 44 contains a list of the names and a brief description of the variables in the EXP## data sets. The annualization, aggregation and estimation procedures used are explained below. Differences across years are pointed out as applicable.

[28] Prices have not been deflated in the calculation of household consumption and expenditure on food, non-food, housing and other items. The National and Regional Monthly Price Indices are provided in Appendix F.

Table 44. Contents of the JSLC Constructed Consumption Aggregate Data Sets, EXP##

Variable Name	Variable Description
HID[A]	Four digit household identification number
HHSIZE	Number of members in household
CLUSTER	Cluster id number, CLUSTER=PARISH*100000+CONSTIT*1000+ENUMDIS
EDSIZE	Enumeration district size
DAILEXP	Daily expenditures
CONSEXP	Consumption expenditures
CONSGFT	Consumption of goods received as gifts
NONCONS	Non-consumption expenditure
FOODEXP	Food expenditure
FOODGFT	Consumption of Home Production and Food Received as Gift
FOODHPR[B]	Consumption of Home Production of Food
TOTEXP1(88-91)	Total consumption expenditure=DAILEXP+CONSEXP+CONSGFT+FOODEXP+FOODGFT
TOTEXP1(92-00)	Total cons exp=DAILEXP+CONSEXP+CONSGFT+FOODEXP+FOODGFT+FOODHPR
TOTEXP2	TOTEXP1+NONCONS
MORTGAGE[C]	Annual amount of mortgage payment
PROPTAX[C]	Annual amount of property tax payments
HSREPAIR[C]	Annual cost of house repairs
WATER[C]	Annual water bill
ELECTR[C]	Annual electricity bill
RENTPAY	Dummy equal to 1 if rent is paid
RENT	Annual rent, paid or imputed
DURSERV[D]	Total annual use of household durable goods
TOTCONS1	Total consumption=TOTEXP1+RENT+DURSERV
TOTCONS2	TOTEXP2+RENT+DURSERV
PCEXP1	Per capita consumption=TOTCONS1/HHSIZE
PCEXP2	TOTCONS2/HHSIZE

[A] Not included in EXP91.

[B] Only in EXP92, EXP93, EXP94, EXP95, EXP96, EXP97, EXP98, EXP99.

[C] Not included in EXP91, EXP92, EXP93, EXP94, EXP95, EXP96, EXP97, EXP98, EXP99, EXP00.

[D] Not included in EXP88.

6.1.1 Household Identification

Households are identified by the four digit code, HID, that corresponds to the serial number from the cover of the questionnaire. This number is unique within, but not between, survey years.

For each household the household size has been computed by tabulating the number of household members in each household. Note that not all respondents listed in the household roster are household members. Some people present on the day of the interview or listed in the roster will not meet the resident requirements to be considered household members.

The cluster of each household is also noted. The CLUSTER variable assigns a unique identification number to each enumeration district.

CLUSTER=ENUMDIS+PARISH×100,000+CONSTIT×1,000[29]

EDSIZE is the number of households in each enumeration district that are included in the sample.

6.1.2 Annual Expenditure Variables

In general, where both the short period and the long period values exist for an item, the method used by the Bank to calculate annualized expenditure uses the value from the longer period.[30] Table 45 outlines the action taken in the case of inconsistent coding and missing values.

Table 45. Calculation of Annualized Values

Have you bought in the short period	Amount spent in short period	Amount spent in long period	Did you receive a gift	Amount of gift	Action Taken
		>=0			Annual=long period amount
Yes	>=0	missing			Annual=annualized short period amount

The short and long time periods vary across the expenditure modules and across survey years as outlined in the tables in Section 2.1. The exact contents of the expenditure modules also changed somewhat across years. Table 46 records the item codes corresponding to the various variables in each survey year.

For the items in the Daily Expenses module, the only value given is the amount spent during the past seven days or previous week. The annual expenditure is calculated by multiplying the value by 52 for each item. All items for each household are summed to form the variable DAILEXP. Any missing values are taken to be equal to zero.

For the items about the meal and drinks purchased away from home in JSLC 1993, only household member's records were used. (Overall, there are only three cases where non-household members reported these numbers.) All items for each household are summed to form the variable DAILEXP. Any missing values are taken to be equal to zero.

The Consumption Expenditures module items fall into three categories. The first category includes items for which information is collected regarding only expenditures during the last 30 days. This monthly amount is multiplied by 12 to produce an annual expenditure. The

[29] The variable names for enumeration district, parish and constitutency may change, see Table 37.

[30] Note that this annualization procedure differs from that used by STATIN to clean the data and produce the statistical abstract for the JSLC. The STATIN procedure calculates annual expenditure and consumption by averaging the annualized values of the shorter period and the longer period (minus the shorter period). See Appendix H for a more complete description of the STATIN/PIOJ procedure.

second category includes items for which information is collected regarding expenditures during both the last 30 days and/or the last 12 months, but for which information on the value of gifts is not collected. Annual expenditure is equal to the 12 month value it if exists or 12 times the 30 day value. The third category includes items for which information is collected regarding expenditures during both the last 30 days and the last 12 months, and information on gifts received during the last 12 months is also collected. For these items both annualized expenditures and annual gift amount is calculated. The annualized expenditure for non-food consumption items, except Rental of Equipment, are added together for each household to form CONSEXP. The non-food consumption gift values, again excluding rental of equipment, are added together to form CONSGFT. Note: Rental of Equipment was not excluded from CONSEXP and CONSGFT in 1992.

Non-Consumption Expenditure is calculated from the twelve month value where is exists and from the annualized 30 day value where it does not. The annual values for all items are summed to produce the NONCONS value for each household.

Last week and last month food expenditures are collected in the Food Expenses module. Where available the monthly figure is multiplied by 12. Otherwise, the seven day value is multiplied by 4.33*12. The annual values for all purchased food items are summed to produce the FOODEXP value for each household. In the surveys for 1988 through 1991, the values of home-produced food and food received as gifts were combined into a single variable, FOODGFT. Starting in 1992, the two values were calculated separately, FOODGFT and FOODHPR.

Table 46. Contents of Consumption Aggregate Variables by Year

JSLC	Consumption Aggregates						
	DAILEXP	CONSEXP	CONSGFT	NONCONS	FOODEXP	FOODGFT	FOODHPR
1988	EXP101-107	EXP201-241 exc. 208	GFT201-227	EXP250-256	EXP401-444	GFT501-539	
1989_1	EXP101-107	EXP201-240 exc. 208	GFT201-207, 212-229	EXP250-258	EXP401-445	GFT501-541	
1989_2	EXP101-107	EXP201-240 exc. 208	GFT201-207, 212-229	EXP250-258	EXP401-445	GFT501-541	
1990	EXP101-107	EXP201-240 exc. 208	GFT201-208, 212-219, 221-229	EXP250-259	EXP401-445	GFT501-541	
1991	EXP101-107	EXP201-241 exc. 208	GFT201-229	EXP250-259	EXP401-446	GFT501-541	
1992	EXP101-106	EXP201-248	GFT201-211, 215-222, 225-234	EXP250-258	EXP401-455	GFT401-455	HPR401-455
1993	EXP101-105	EXP201-249	GFT201-211, 215-222, 225-237	EXP250-259	EXP401-455	GFT401-455	HPR401-455
1994-1996	EXP101-106	EXP301-349	GFT301-311,315-322,325-349	EXP401-409	EXP201-255	GFT201-255	HPR201-255
1997-1999	EXP101-106	EXP301-349	GFT301-311,315-322,325-349	EXP401-413	EXP201-255	GFT201-255	HPR201-255
2000	EXP102-112, 115	EXP301-349	GFT301-311,315-322,325-349	EXP401-413	EXP201-255	GFT201-255	HPR201-255

6.1.3 Housing Expenses

Data from the Housing module are used to compute expenditure on housing and utilities. For dwellings that are rented, the annual value of rent paid is calculated based on the reported information. Only the amount the household pays is included. For homeowners, the annual value of the mortgage payments is similarly calculated. For all households the amount spent on repairs to the dwelling in the last 12 months is noted. The annual water bill is calculated by multiplying the amount paid in the last bill by the number of times the bill is paid in one year. The annual electric bill is calculated by multiplying the amount of the last bill by 12 and dividing by the number of months that were covered by that bill. Housing expense variables are not available in the EXP92. The researcher may access those figures in the REC016 housing expenses data set.

The computation of imputed rent for those owning their house is performed using a log-linear model. A probit model was used to estimate the likelihood of renting as a function of the schooling, sex and age of the household head and the area of residence.

Yearly rent is estimated as a function of explanatory variables using only data from the renters in the sample. The log of annual rent is calculated for those houses that are leased, private rented or government rented. Explanatory variables include schooling of the household head, log of per capita household expenditure, type of dwelling, material of walls, kind of toilet facilities, source of drinking water and lighting, presence of a kitchen and a telephone. The selectivity term calculated from the probit results was included in the regression of the log annual rent and found to be insignificant. The estimated coefficients were applied to the characteristics of the owners to obtain their imputed rent. The variable RENT contains actual rent for renters and the imputed value for all others. The renter is identified with dummy RENTPAY which equals 1 when the household rents the dwelling.

The JSLC 1991 had an expanded Housing module which included information on type of roof, type of floor, total number of rooms, etc. Some of these variables were used in the calculation of RENT.[31]

6.1.4 Durable Goods

The service value of durable goods is not calculated for 1988 because all the necessary information was not collected in the survey. The use value of a durable good is its annual loss in value, or equivalently, the difference in the resale price at the beginning of the year and at the end of the year.

Implausibly high value of good when acquired and current value of good are excluded. Deflation factors are calculated for each year using the Jamaica Consumer Price Index. For each good a depreciation rate is calculated [1- (DEFLATE×current value/value at acquisition)^(1/current year-year of acquisition)]. The mean depreciation rate for each good is used to calculate the use value [current value×(1/(1-mean depreciation)-1)].

This ceiling for high value of goods is one million Jamaican dollars. For each good purchased in the acquisition year, a depreciation rate is calculated :

$$\left(\frac{v_o - \sigma v}{v_o}\right)^{\frac{1}{\tau - \tau_o}}$$

where v_o is the value at acquisition

v is the current value

t is the current year and t_0 the year of acquisition.

$*$ is the deflator from t to t_0 .

[31] Variables used include: type of roof, type of floor, and log of the total number of rooms.

This number may be negative if the reported current value is higher than the value at acquisition. Item 606 (fan), 610 (video equipment) , 613 (bicycle) and 615 (car) are the items with significant negative depreciation rate.

The mean depreciation rate for each good is used to calculate the use value

[current value×(1/(1-mean depreciation)-1)].

Note that if the mean depreciation rate is negative, the use value will be a negative number. The case of this type will be reset to 0.

The use value of all durable goods reported by the household are summed to form the variable DURSERV.

6.1.5 Aggregation

The annualized values for each of the items in each section are then added up to form the aggregate expenditure variables: DAILEXP, CONSEXP, CONSGFT, NONCONS, FOODEXP and FOODGFT. Rental of Equipment is excluded from the CONSEXP. The consumption variables, the first three and last two, are then added to create TOTEXP1 or total consumption expenditure. NONCONS is added to form TOTEXP2. The expenditure and gift values for Rental of Equipment are included to form TOTEXP3.

RENT, but not utilities and household repair, are added to the three TOTEXP# variables to produce the three TOTCONS# variables. Per capita total consumption variables, PCEXP# are calculated by dividing HHSIZE into TOTCONS# (not TOTEXP#).

Medical and schooling expenditures from the Health and Education modules are not included in these aggregates. There are items in the Consumption Expenditures module that cover medicines, medical services and education expenses.

A few cautionary notes are worth repeating. First, as outlined in Section 6.1.2 above, the content of the consumption expenditure surveys varies from round to round. Second, comparison across years will need to take this into consideration the effect of Hurricane Gilbert on consumption, expenditure and income. Third, the cleaning procedures and aggregation method differ from those employed by STATIN. The STATIN procedures are described in detail in Appendix H.

6.2 Z-Scores, NUTR

The anthropometric data sets have been analyzed and Z-scores have been calculated using ANTHRO (version 1.01) software from the Nutrition Unit of the World Health Organization.

These scores provide measures of wasting, stunting and malnutrition. The variable names and descriptions are provided in Table 47. Children are uniquely identified by a four-digit household id and a two digit personal id that correspond to the HID and PID in the household survey modules. The age and sex of the child and the actual height and weight measurements are included. Four measures of nutritional status have then been calculated. (Only three measures are available for 1989-1 and 1989-2.) The FLAG variable notes which, if any, of the Z-scores are more than six standard deviations from the mean.

Both the weight and height measurements were to be recorded up to one decimal point of precision. The data are found to exhibit significant clustering at endpoints 0.0 and 0.5 for all variables except the weight measurements for 1990. No NUTR data set is available for the JSLC 1988 due to concern over the accuracy of the anthropometric measurements.

Table 47. Contents of the JSLC Constructed Anthropometric Data Sets, NUTR

JSLC Variable	Name	
1989/1-89/2	1990-2000	Variable Description
HID	HID	Household identification number
PID	PID	Personal identification number
SEX	SEX	Child's sex: 1=male, 2=female
AGE	AGE	Child's age in months
WEIGHT	WEIGHT	Child's weight in kilograms
HEIGHT	HEIGHT	Child's height in centimeters
HAZ	HAZ	Height for age Z-score
WAZ	WAZ	Weight for age Z-score
WHZ	WHZ	Weight for height Z-score
	BMI	Body Mass Index
	FLAG	Flag, index more than six std. dev. from mean: 0=None 1=HAZ 2=WHZ 3=HAZ WHZ 4=WAZ 5=HAZ WAZ 6=WHZ WAZ 7=HAZ WHZ WAZ

7. SUMMARY

This document is designed to provide an overview of the data available from the Jamaica Survey of Living Conditions and to set out the procedures for obtaining the data. All the basic knowledge required to use the data is contained in this document and the questionnaires. The training manuals and additional papers are also available. Inquiries may be directed to the World Bank at the address listed in Appendix A.

List of Appendices

Appendix A. How to Obtain the JSLC Data

The JSLC data are solely the property of the Government of Jamaica. The World Bank will be provided with unrestricted use of the JSLC data and may transfer the JSLC data to third parties on receipt of written permission from the Planning Institute of Jamaica. The data from the Survey of Living Conditions will be made available for use by the general research community subject only to the restrictions that:

i) data users shall not transmit them to third parties;

ii) in all uses of the data, due recognition of their source shall be made;

iii) prior to release or publication of analysis resulting from JSLC data, the researcher shall allow the Planning Institute of Jamaica a period of four weeks to comment on the paper.

iv) the researcher shall make copies of all publications stemming from the data available to the documentation centers of the Planning Institute of Jamaica, the Institute of Social and Economic Research at the University of the West Indies, and the Statistical Institute of Jamaica.

Requests for the JSLC data should include a detailed description of the intended research and may be directed to:

Pauline Knight, Director
Social and Manpower Planning Division
Planning Institute of Jamaica
10-16 Grenada Way
Kingston
JAMAICA
tel: (876) 906-4463
fax: (876) 906-5011

e-mail: doccen@mail.colis.com

OR

Living Standards Measurement Study
Development Research Group - Poverty
The World Bank
1818 H Street, N.W.
MSN MC3-306
Washington, DC 20433 USA
tel: (202) 473-9041
fax: (202) 522-1153

e-mail: lsms@worldbank.org

There is a fee associated with the distribution of the documentation and data sets. The World Bank provides them on CD Rom, in SAS Portable, STATA, and ASCII files. The Poverty and Human Resources Division of the World Bank requests copies of all reports and documents resulting from research that uses the data. The researcher should further note that once received, the data cannot be passed on to a third party for any reason or used for other research. Other researchers must contact the World Bank directly for access to these data. Any infringement on this policy will result in the denial of future access to World Bank LSMS data.

Appendix B. List of JSLC Data Sets Available

The following data sets are available on 3 ½" diskette. All are available in SAS portable (version 5), STATA (version 2.1) and ASCII files.

	JSLC DATA SETS					
	1988	1989-1	1989-2	1990	1991	1992
Cover	F01	COVER	COVERC	COVER	REC001	REC001
Roster	F02	ROSTER	ROSTERC	ROSTER	REC002	REC002 REC003
Health	F03	SECTA1 SECTA2 SECTA3 SECTA4	SECTA SECTB1 SECTB2 SECTB3	SECTA1 SECTA2	REC003 REC004 REC005	REC004 REC005 REC006
Education	F04	SECTB1 SECTB2 SECTB3	SECTC	SECTB1 SECTB2A-C SECTB3A-D SECTB4A-D SECTB5A-F SECTB6A-C	REC006	REC007
Anthropometric	F05	SECTC	SECTD	SECTC	REC007	REC008
Daily Expenses	F06	SECTD	SECTE	SECTD	REC008	REC012
Consumption Expenditures	F07	SECTE	SECTF	SECTE	REC009	REC013
Non-Consumption Expenditures	F08	SECTF	SECTG	SECTF	REC010	REC014
Food Expenses	F09	SECTG	SECTH	SECTG	REC011	REC015
Home Produced Food	F10	SECTH	SECTI	SECTH	REC012	REC015
Housing	F11	SECTI	SECTJ	SECTI	REC013-19	REC016
Durable Goods	F12	SECTJ	SECTK	SECTJ	REC020	REC017
Other Income	(F11)	SECTK	SECTL	SECTK	REC021	REC018- REC021
Food Stamps	(F11)	SECTL	SECTM	SECTL	REC022 REC023	REC009 REC010 REC011
Distance to Services		SECTM	SECTN			
Fertility Last Pregnancy			SECTO-O1 SECTP SECTP1-P3			
Labor Force	LABORF	LABORF	LABORF	LABORF	LABORF	LABORF
Health Facilities			PUBPRM PRVPRM PUBSEC PRVSEC1 PRVSEC2 HLTCODES			
School Facilities, Teachers, Test Scores				ADMIN TEACHER CATSTU		
Constructed	EXP88	EXP89_1 NUTR	EXP89_2 NUTR	EXP90 NUTR	EXP91 NUTR ANNUAL	EXP92 NUTR ANNUAL

	JSLC DATA SETS					
	1993	1994	1995	1996	1997	1998
Cover	REC001	REC001	REC001	REC001	REC001	REC001
Roster	REC031 REC032	REC030 REC031	REC031 REC032	REC033 REC034	REC046 REC047	REC023 REC024
Health	REC002- REC004	REC002- REC004	REC002- REC004	REC002- REC011	REC002- REC004	REC002- REC004
Education	REC005	REC005 REC006	REC005 REC006	REC012 REC013	REC005 REC006	REC005 REC006
Anthropometric	REC006	REC007	REC007	REC014	REC007	REC007
Daily Expenses	REC010 REC011	REC010	REC017	REC021	REC017	REC011
Consumption Expenditures	REC013	REC015	REC022	REC025 REC026	REC021 REC022	REC016
Non-Consumption Expenditures	REC014	REC016	REC023	REC027	REC023	REC017
Food Expenses	REC016	REC012	REC019	REC022 REC023	REC018 REC019	REC013
Home Produced Food	REC017	REC013	REC020	REC024	REC020	REC014
Housing	REC019	REC020	REC027	REC029	REC027	REC018
Durable Goods	REC020 REC021	REC022 REC023	REC028 REC029	REC030 REC031	REC028 REC029	REC019 REC020
Other Income	REC022	REC024	REC030	REC032	REC030 REC031	REC021 REC022
Food Stamps	REC007- REC009	REC017- REC019	REC024- REC026	REC028	REC024- REC026	REC008- REC010
Adequacy of Consumption	REC018					
Employment and Time Use	REC023-REC030					
Point of Purchase		REC025-REC029				
Shortened Item by Item Consumption		REC001_S- REC013_S				
Social Mobility		REC008				
Aging			REC008- REC016			
Child Fostering				REC015- REC019		
Employment and Earnings					REC008-REC016	
Adequacy of Income					REC032-REC034	
Savings					REC035-REC039	
Money Borrowed					REC040-REC043	
Money Lent					REC044-REC045	
Poverty Lines						POVLINE
Parish Weights						PARWGHTS
Labor Force	LABORF	LABORF	LABORF	LABORF	LABORF	LABORF
Constructed	EXP93 ANTHRO93 ANNUAL	EXP94 ANTHRO94 ANNUAL ANNUAL_P ANNUAL_S	EXP95 ANTHRO95 ANNUAL	EXP96 ANTHRO96 ANNUAL	EXP97 ANTHRO97 ANNUAL	EXP98 ANTHRO98 ANNUAL

	JSLC DATA SETS					
	1999	2000				
Cover	REC001	REC001				
Roster	REC031 REC032	REC025 REC026				
Health	REC002-REC004	REC002-REC005				
Education	REC005-REC007	REC006-REC008				
Anthropometric	REC008	REC009				
Daily Expenses	REC012	REC013				
Consumption Expenditures	REC017	REC018				
Non-Consumption Expenditures	REC018	REC019				
Food Expenses	REC014	REC015				
Home Produced Food	REC015	REC016				
Housing	REC019	REC020				
Durable Goods	REC020 REC021	REC021 REC022				
Other Income	REC022 REC023	REC023 REC024				
Food Stamps	REC009-REC011	REC010-REC012				
Poverty & Coping Strategies	REC024-REC030					
Labor Force	LABORF					
Constructed	EXP99 NUTR99 ANNUAL	EXP00 NUTR00 ANNUAL				

Appendix C. List of Related Documents

The following documents can be obtained from the World Bank, Poverty and Human Resources Division, Development Research Group, Poverty Team at the address found in Appendix A. Many may also be downloaded from the LSMS web site:

http://www.worldbank.org/lsms/lsmshome.html

A. Questionnaires (free of charge)

1. Household Questionnaire, 1988
2. Household Questionnaire, 1989-1
3. Household Questionnaire, 1989-2
4. Household Questionnaire, 1990
5. Household Questionnaire, 1991
6. Household Questionnaire, 1992
7. Household Questionnaire, 1993
8. Household Questionnaire, 1994
9. Household Questionnaire, 1994, experimental module
10. Household Questionnaire, 1995
11. Household Questionnaire, 1996
12. Household Questionnaire, 1997
13. Household Questionnaire, 1998
14. Household Questionnaire, 1999
15. Household Questionnaire, 2000
16. Teacher Questionnaire, 1990
17. School Administrator Questionnaire, 1990
18. Public Primary Health Services Questionnaire, 1989-2
19. Private Primary Health Services Questionnaire, 1989-2
20. Public Secondary and Tertiary Health Services, 1989-2
21. Private Secondary and Tertiary Health Services, 1989-2
22. Labor Force Survey Questionnaire, 1989
23. Labor Force Survey Questionnaire, 1995-1997

B. Training Manuals

1. 1988 JSLC Data Entry Screens and Record Layout, 38 pages
2. Labor Force Survey Interviewer's Instruction Manual, 60 pages
3. 1988 Interviewer's Instruction Manual, 18 pages
4. June 1989 SLC Interviewer Manual, 16 pages
5. November 1989 JSLC Interviewer's Instruction Manual, 36 pages
6. November 1991 JSLC Interviewer's Instruction Manual, 47 pages
7. 1992 Interviewer's Instruction Manual, 45 pages
8. August 1990 Health Facility Survey Interviewer's Instruction Manual, 33 pages

9. October 1990 Expanded Education Module and Test Administrator Instruction Manual, 14 pages
10. 1993 Interviewers Instruction Manual for Pre-test, 38 pages
11. 1994 Interviewers Instruction Manual, 53 pages
12. 1995 Interviewers Instruction Manual, 45 pages
13. 1996 Interviewers Instruction Manual, 45 pages
14. 1997 Interviewers Instruction Manual, 55 pages

C. Jamaica Survey of Living Conditions Abstracts

1. Jamaica Survey of Living Conditions, 1988: Preliminary Report, 125 pages
2. Jamaica Survey of Living Conditions, Final Report, July 1989. STATIN/PIOJ, 68 pages
3. Jamaica Survey of Living Conditions, Preliminary Report, July 1989, 81 pages
4. Jamaica Survey of Living Conditions, November 1989. STATIN, 34 pages
5. Jamaica Survey of Living Conditions, November 1989. PIOJ, 83 pages
6. Jamaica Survey of Living Conditions, November 1990. STATIN, 85 pages
7. Jamaica Survey of Living Conditions Analytical Review, 1990. PIOJ, 56 pages
8. Jamaica Survey of Living Conditions Report, 1991. PIOJ/STATIN, 86 pages
9. Jamaica Survey of Living Conditions Report, 1992. PIOJ/STATIN, 136 pages
10. Jamaica Survey of Living Conditions Report, 1993. PIOJ/STATIN, 129 pages
11. Jamaica Survey of Living Conditions Report, 1994. PIOJ/STATIN, 141 pages
12. Jamaica Survey of Living Conditions Report, 1995. PIOJ/STATIN, 132 pages
13. Jamaica Survey of Living Conditions Report, 1996. PIOJ/STATIN, 174 pages
14. Jamaica Survey of Living Conditions Report, 1997. PIOJ/STATIN, 171 pages
15. Jamaica Survey of Living Conditions Report, 1998. PIOJ/STATIN, 242 pages
16. Jamaica Survey of Living Conditions Report, 1999. PIOJ/STATIN, 186 pages

D. Other

1. Jamaica Industrial Classification, 1987. STATIN. 126 pages
2. Revised Classification of Occupations, March, 1984. STATIN. 45 pages

Appendix D. List of Papers and Reports Using the JSLC Data

The following is a list of papers, published and unpublished, and research in progress that make use of the JSLC data insofar as we are aware as of July 2000. While probably somewhat incomplete, it is provided to guide researchers who are seeking to build on, but not reproduce work that has already been done. Copies of all papers and publications resulting from the analysis of LSMS data sets should be sent to the World Bank at the address listed in Appendix A. Copies of LSMS Working Papers are available from the World Bank, Poverty and Human Resources Division, Policy Research Department.

Alleyne, Dillon. 1992. "Final Report on the Assessment of the Quality of the 1989 Survey of Living Conditions (SLC) Data Sets." Planning Institute of Jamaica.

Anderson, Patricia. 1992. "Designing the Food Stamp Programme to Reach the Poor." Working Paper No. 5. Jamaica Poverty Line Project Planning Institute of Jamaica.

_____. 1990. "Levels of Poverty and Household Food Consumption in Jamaica in 1989." Paper presented at the Workshop on Food and Nutrition Policies: Issues and Recommendations for the 1990's and Beyond, organized by the National Food and Nutrition Coordinating Committee of Jamaica and the Caribbean Food and Nutrition Institute. Jamaica Conference Center, February 13-14, 1990.

Baker, Judy L. 1992. "The Jamaica Student Loan Program." In Margaret E. Grosh, ed., "From Platitudes to Practice: Targeting Social Programs in Latin America," Vol II, Case Studies, World Bank, Lating and the Caribbean Technical Department, Regional Studies Program, Report No. 21, Washington, DC.

_____. 1992. "The Nutribun and Milk School Feeding Program." In Margaret E. Grosh, ed., "From Platitudes to Practice: Targeting Social Programs in Latin America," Vol II, Case Studies, World Bank, Lating and the Caribbean Technical Department, Regional Studies Program, Report No. 21, Washington, DC.

Baker, Judy L. and Jacques van der Gaag. 1993. "Equity in health care and health care financing: evidence from five developing countries." Chapter 20 in Van Doorslaer, Eddy, Adam Wagstaff and Frans Rutten, eds., *Equity in the Finance and Delivery of Health Care: An International Perspective*. Oxford: Oxford University Press.

Baker, Judy L. and Margaret Grosh. 1994. "Measuring the Effects of Geographic Targeting on Poverty Reduction." Living Standards Measurement Study, Working Paper No. 99.

_____. 1994. "Poverty Reduction Through Geographic Targeting: How Well Does it Work?" *World Development*. Vol 22, No. 7, pp 983-995. Oxford: Pergamon Press.

Blank, Lorraine, Margaret Grosh, and Pauline Knight. 1996. "Building Analytic Capacity in Conjunction with LSMS Surveys: The Jamaica Story." Research Project 679-61, Paper

No.1. World Bank, Policy Research Department, Poverty and Human Resources Division, Washington, D.C.

Bronte-Tinkew, Jacinta M.H. 2000. "Family Structure and Resource Dilution Effects on Child Outcomes: A Comparative Analysis of Jamaica and Trinidad and Tobago." Ph.D. diss., Pennsylvania State University, Department of Sociology.

Caribbean Food and Nutrition Institute. 1990. "Household Food Accessibility in November, 1989 in Jamaica".

Chambers, Claudia M. "Attendance, Achievement and Aspects of the Learning Environment in Primary Education - A Prognosis for Secondary Education (Jamaica)" Proposed research.

Fiszbein, Ariel and George Psacharopoulos. 1992. "Income Inequality Trends in Latin America in the Eighties: A Decomposition Analysis." Paper presented at the Brookings Institution Conference Confronting the Challenge of Poverty and Income Distribution in Latin America, Washington, DC.

Gertler, Paul and Toni Richards. "The Content of Prenatal Care and Child Health."

Gertler, Paul, Chris Feifer and Toni Richards. 1990. "Safe Motherhood in Jamaica: A Proposed Workplan." RAND.

_____. 1990. "Technical Support for Strengthening Health Care Resource Mobilization Policy in Jamaica." RAND.

Gertler, Paul, John Strauss, Laura Kohn, My Vuong and Nga Vuong. 1993. "User Fee Policy Simulations from a Provider Choice Model: Preliminary Results."

Gertler, Paul, John Strauss, Omar Rahman, and Kristin Fox. 1992. "Gender and Life-Cycle Differentials in the Patterns and Determinants of Adult Health." *Journal of Human Resources*, June.

Gertler, Paul, John Strauss, Omar Rahman, Nga Vuong and My Vuong. 1993. "Health Care Utilization and Provided Choice in Jamaica: An Interim Report." Mimeo. RAND.

Gertler, Paul, Omar Rahman, Deanna Ashley, and Kristin Fox. 1992. "High Risk Pregnancies and Maternal Health Services in Jamaica." Mimeo. RAND.

Glewwe, Paul, Margaret E. Grosh, Hanan Jacoby and Marlaine Lockhheed. 1993. "An Eclectic Approach to Estimating the Determinants of Achievement in Jamaican Primary Education," mimeo. The World Bank.

Gordon, Derek. 1989. "Identifying the Poor: Developing a Poverty Line for Jamaica." Working Paper No. 3. Jamaican Poverty Line Project, Planning Institute of Jamaica.

Grosh, Margaret E. 1994. "Administering Targeted Social Programs in Latin America: From Platitudes to Practice." World Bank Sectoral and Regional Study. Washington, DC.

_____. 1992. "The Jamaican Food Stamps Programme: A Case Study in Targeting." *Food Policy*, February, 1992.

_____. 1991. "The Household Survey as a Tool for Policy Change: Lessons from the Jamaican Survey of Living Conditions." LSMS Working Paper No. 80.

_____ and Judy L. Baker. 1993. "Protecting Poor Jamaicans from Currency Devaluation." HRO Working Paper No. 10, World Bank, Washington, DC.

_____ and Judy L. Baker. 1995. "Proxy Means Tests for Targeting Social Programs: Simulations and Speculation." LSMS Working Paper 118.

_____, Kristin Fox and Marie Jackson. 1991. "An Observation on the Bias in Clinic-based Estimates of Malnutrition Rates." PRE Working Paper No. 649.

_____, Qing-hua Zhao, and Henri-Pierre Jeancard. 1995. "The Sensitivity of Consumption Aggregates in Questionnaire Formulation: Some Preliminary Evidence from the Jamaican and Ghanaian LSMS Surveys." Research Project 679-61, Paper No. 6. World Bank, Policy Research Department, Poverty and Human Resources Division, Washington, D.C.

Handa, Sudhanshu. 1994. "The Effect of the Jamaican Food Stamp Program on Household Food Expenditures and Child Nutritional Status." Mimeo. University of West Indies.

_____. "Teenage Schooling in Jamaica: The Effect of Headship and Maternal Education." mimeo. University of Toronto.

_____. "Gender, Headship, and Intra-Household Allocation." 1993/94 Seminar Series Department of Economics, University of the West Indies.

_____. 1993. "Family Structure, Female Headship, and Children's Welfare in Jamaica." PhD Dissertation, University of Toronto.

_____. "The Determinants of Female Headship in Jamaica: Results from a Structural Model." University of Toronto.

_____."More Evidence on the Role of Maternal Education in the Production of Child Height." University of the West Indies, Department of Economics.

_____. 1995. "The Determinants of Teenage Schooling in Jamaica: Rich vs. Poor, Females vs. Males." University of West Indies, Department of Economics.

_____. 1995. “Mortality, Fertility, and Recent Fertility in Jamaica.” University of the West Indies.

_____, and Damien King. 1995. “Structural Adjustment Policies, Income Distribution and Living Standards: The Jamaica Experience.” University of the West Indies.

Harris, Abigail. 1993. "The Validity of the California Achievement Test as a Measure of Educational Productivity in Jamaica." Mimeo. Fordham University, New York.

Henry-Lee, Aldrie. 1996. "Economic Recession, Structural Adjustment and Health in Jamaica." XIVth Conference on the Social Sciences and Medicine, Peebles, Scotland, September 2-6.

Hotchkiss, Julie L. and Robert E. Moore. 1996. "Gender Compensation Differentials in Jamaica." Economic Development and Cultural Change, 44(3 April) 657-676.

Huff-Rousselle, Maggie and John Turnbull. 1989. “Assessment of Jamaican Public Sector Pharmaceutical System.” Mimeo. Technologies for Primary Health Care (PRITECH) Project.

Jacoby, Hanan. "Self-Selection and the Redistributive Impact of In-Kind Transfers: An Evaluation of the Jamaican Nutribun and Milk Program." Mimeo.

King, Elizabeth M., Mark R. Rosenzweig and Yan Wang. 1991. "Human Capital and Entrepreneurship: Evidence from Developing Countries." Background Paper for 1991 World Development Report, November, 1991.

_____. 1991. "The Economic Burden of Illness: Some Evidence from Developing Countries." Background paper for 1991 World Development Report.

Lavy, Victor, Michael Palumbo, and Steven Stern. 1995. “Health Care in Jamaica: Quality, Outcomes and Labor Supply.” Living Standard Measurement Study, Working Paper No. 116.

Levine, Ruth. 1990. “Assessment of Health Manpower Development in Jamaica.” Mimeo. The Urban Institute, Washington, DC.

Louat, Frédéric, Margaret Grosh and Jacques van der Gaag. 1992. "Welfare Implications of Female-Headship in Jamaican Households." LSMS Working Paper, No. 96.

Manderson-Jones, Mignon. "The School Feeding Programme." Project proposal.

Morris, Ruth Romane. "An Analysis of the Factors which Impinge of School Attendance." Project proposal.

Peabody, John W., Omar Rahman, Kristen Fox and Paul Gertler. 1993. "Public and Private Delivery of Primary Health Care Services in Jamaica: A Comparison of Quality in Different Types of Facilities." mimeo. RAND.

Planning Institute of Jamaica. 1990. “The Impact of Food Prices on the Poor.” Jamaica Poverty Line Project Working Paper No. 4.

Ray, Ranjan. 1998. "Child Health and its Determinants in Developing Countries: A Cross Country Comparison." mImeo. School of Economics, University of Tasmania.

Scott, Katherine MacKinnon. 1992. "Female Labor Force Participation and Earnings: The Case of Jamaica." In George Psacharopoulos and Zafiris Tzannatos, eds., *Women's Employment and Pay in Latin America: Part II Country Case Studies*. Washington, DC: The World Bank.

Stewart, Rigoberto, Curtis E. Youngblood, Norberto A. Quezada and David L. Franklin. 1989. "Food Security in Jamaica: An Evaluation of the Food Subsidy Programmes." Mimeo. Sigma One Corporation. Research Triangle Park, North Carolina.

Strauss, John, Paul Gertler, Omar Rahman and Kristin Fox. 1992. "Gender and Life-Cycle Differentials in the Patterns and Determinants of Adult Health." Forthcoming in Journal of Human Resources.

Swezy, F. Curtiss, Joel R. Greenspan, and Larry J. Forgy. 1987. “Review of the Jamaican Health Sector and an Assessment of Opportunities for External Donor Support. Mimeo.

Weiss, Brenda. WID U Mass

Witter, Michael. 1989. "Analysis of Food Assistance Programmes in Jamaica." Working Paper No. 1, November, 1989. Jamaican Poverty Line Planning Project, Planning Institute of Jamaica.

World Bank. 1994. “Jamaica Health Sector Review: Present Status and Future Options.” Lating America and Caribbean Region, Department III, Human Resources Division.

Appendix E. School Code Corrections

The following corrections should be made to correct the eleven school code variables in the 1990 JSLC Section B data sets.

To Correct variable SB2Q05 in SECTB2A:
IF SB2Q05 < 1000 THEN SCH=.
IF 1005 # SB2Q05 # 14131 THEN SCH=SB2Q05*100
IF SB2Q05 = 888888 THEN SCH=.
IF SB2Q05 = 999999 THEN SCH=.

To Correct variable SB2Q08 in SECTB2B:
IF 1008 # SB2Q08 # 14131 THEN SCH=SB2Q08*100
IF SB2Q08 = 999999 THEN SCH=.

To Correct variable SB3Q07 in SECTB3A:
IF SB3Q07 < 1000 THEN SCH=.
IF 1005 # SB3Q07 # 14131 THEN SCH=SB3Q07*100
IF SB3Q07 = 14982 THEN SCH=?
IF SB3Q07 = 90309 THEN SCH=
IF 20274 # SB3Q07 # 80774 THEN SCH=SB3Q07*10
IF SB3Q07 = 888888 THEN SCH=.
IF SB3Q07 = 999999 THEN SCH=.
Invalid codes for which there is no correction:
14982 90309 101037 101374 101375 111109 113120
121374 123182 130274 140882 141421 210725

To Correct variable SB3Q11 in SECTB3B:
IF SB3Q11 < 1000 THEN SCH=.
IF 1005 # SB3Q11 # 14131 THEN SCH=SB3Q11*100
IF SB3Q11 = 99999 THEN SCH=.
IF 20274 # SB3Q11 # 80774 THEN SCH=SB3Q11*10
IF SB3Q11 = 888888 THEN SCH=.
IF SB3Q11 = 999999 THEN SCH=.
Invalid codes for which there is no correction:
14982

To Correct variable SB3Q22 in SECTB3D:
IF SB3Q22 < 1000 THEN SCH=.
IF 1005 # SB3Q22 # 14131 THEN SCH=SB3Q22*100
IF SB3Q22 = 99999 THEN SCH=.
IF 20274 # SB3Q22 # 80774 THEN SCH=SB3Q22*10
IF SB3Q22 = 888888 THEN SCH=.
IF SB3Q22 = 999999 THEN SCH=.
Invalid codes for which there is no correction:
1001 14982 20191 110674 111014 113005 121374
130265 130971 130974 140474 210685 900212 901022

To Correct variable SB4Q02 in SECTB4A:
IF SB4Q02 < 1000 THEN SCH=.
IF 1005 # SB4Q02 # 14131 THEN SCH=SB4Q02*100
IF SB4Q02 = 20130 THEN SCH=201300
IF 20274 # SB4Q02 # 80774 THEN SCH=SB4Q02*10
IF SB4Q02 = 112017 THEN SCH=.
IF SB4Q02 = 121388 THEN SCH=1233880
IF SB4Q02 = 122174 THEN SCH=1221740
IF SB4Q02 = 130974 THEN SCH=1309740
IF SB4Q02 = 132075 THEN SCH=.
IF SB4Q02 = 140274 THEN SCH=1402740
IF SB4Q02 = 141680 THEN SCH=1416800
IF SB4Q02 = 212176 THEN SCH=.
IF SB4Q02 = 888888 THEN SCH=.
IF SB4Q02 = 999999 THEN SCH=.
Invalid codes for which there is no correction:
210685 210775

To Correct variable SB4Q05 in SECTB4A:
IF 1005 # SB4Q05 # 14131 THEN SCH=SB4Q05*100
IF 20274 # SB4Q05 # 80774 THEN SCH=SB4Q05*10
IF SB4Q05 = 121374 THEN SCH=1213740
IF SB4Q05 = 888888 THEN SCH=.
IF SB4Q05 = 999999 THEN SCH=.

To Correct variable SB5Q02 in SECTB5A:
IF SB5Q02 < 1000 THEN SCH=.
IF 1005 # SB5Q02 # 14131 THEN SCH=SB5Q02*100
IF 20274 # SB5Q02 # 80774 THEN SCH=SB5Q02*10
IF SB5Q02 = 888888 THEN SCH=.
IF SB5Q02 = 999999 THEN SCH=.
Invalid codes for which there is no correction:
14179 14684 14982 120474 120874 121374 123182 213778

To Correct variable SB5Q06 in SECTB5A:
IF 1005 # SB5Q06 # 14131 THEN SCH=SB5Q06*100
IF SB5Q06 = 999999 THEN SCH=.

To Correct variable SB5Q17 in SECTB5C:
IF SB5Q17 < 1000 THEN SCH=.
IF 1005 # SB5Q17 # 14131 THEN SCH=SB5Q17*100
IF 20274 # SB5Q17 # 80774 THEN SCH=SB5Q17*10
IF SB5Q17 = 132075 THEN SCH=.
IF SB5Q17 = 212176 THEN SCH=.
IF SB5Q17 = 888888 THEN SCH=.
IF SB5Q17 = 999999 THEN SCH=.
Invalid codes for which there is no correction:
14982 15000 122174 123282 140474 140816 132075 201685

To Correct variable SB6Q13 in SECTB6B:
IF 1036 # SB6Q13 # 14131 THEN SCH=SB6Q13*100
IF SB6Q13 = 999999 THEN SCH=.
Invalid codes for which there is no correction:
14982 15000 121374

To Correct variable SCH in ADMIN:
IF 1005 # SCH # 14131 THEN SCH=SCH*100
Invalid codes for which there is no correction:
210685 210775 388888 488888

To Correct variable SCH in TEACHER:
IF 1005 # SCH # 14131 THEN SCH=SCH*100
Invalid codes for which there is no correction:
101401 108704 210685 210775 388888 488888

Appendix F. National and Regional Monthly Price Indices

All figures are from the Consumer Price Index publications of the Statistical Institute of Jamaica.

Year	Mo.	ALL GROUP				FOOD AND DRINK			
		Jamaica	Kingston	Other Towns	Rural Areas	Jamaica	Kingston	Other Towns	Rural Areas
1988	Jan	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Feb	100.0	99.4	100.4	100.5	99.5	98.3	100.1	100.5
	Mar	100.2	99.8	100.3	100.5	99.7	99.0	99.7	100.4
	Apr	100.6	100.4	100.9	100.8	100.2	99.8	100.6	100.4
	May	100.7	100.4	100.9	101.0	100.0	99.3	100.6	100.4
	Jun	101.4	100.9	102.2	101.5	100.2	99.1	101.8	100.5
	Jul	102.8	101.8	103.6	103.5	102.4	100.6	104.0	103.5
	Aug	104.0	103.2	104.3	105.0	104.3	102.9	104.9	105.5
	Sep	104.1	102.9	104.4	105.5	104.1	102.0	105.2	105.8
	Oct	107.1	106.4	106.8	108.3	108.8	107.6	109.3	109.8
	Nov	108.6	108.1	108.4	109.3	111.7	111.1	112.4	111.9
	Dec	109.2	109.1	108.3	109.8	112.1	112.1	111.6	112.3
1989	Jan	111.3	111.2	110.2	112.1	114.9	115.0	114.2	115.3
	Feb	111.4	111.6	110.4	111.9	115.0	115.6	114.3	114.8
	Mar	112.0	112.4	110.9	112.2	115.6	116.7	114.9	114.9
	Apr	113.0	113.0	111.9	113.7	117.5	117.9	116.5	117.6
	May	116.2	116.5	115.4	116.2	122.3	123.6	121.7	121.2
	Jun	117.7	116.7	116.7	119.7	124.3	123.0	123.3	126.3
	Jul	118.8	117.5	117.5	121.2	126.1	124.6	124.6	128.5
	Aug	119.7	118.6	118.3	122.0	127.4	126.1	126.0	129.6
	Sep	121.5	119.9	120.1	124.4	129.8	127.9	128.5	132.7
	Oct	122.3	120.4	121.4	125.4	130.6	128.2	129.6	133.8
	Nov	124.3	122.9	123.3	126.7	132.4	131.3	131.7	134.1
	Dec	128.0	126.7	126.9	130.4	135.5	134.2	134.9	137.2
1990	Jan	129.6	128.6	128.6	131.6	136.8	136.4	136.1	137.5
	Feb	131.2	129.7	130.4	133.7	138.8	137.2	137.6	139.8
	Mar	134.8	133.2	134.1	137.3	144.0	143.4	143.8	144.7
	Apr	137.0	135.7	136.3	139.2	145.5	145.2	145.1	146.1
	May	137.8	137.0	136.5	139.7	145.3	145.6	143.8	145.7
	Jun	139.0	137.8	138.3	141.2	145.9	145.8	144.7	146.7
	Jul	141.9	140.3	141.2	144.5	150.1	149.4	149.3	151.4
	Aug	146.1	144.6	144.9	149.0	156.1	155.6	154.7	157.4
	Sep	147.4	145.9	146.8	149.7	156.1	156.0	155.8	156.4
	Oct	154.5	153.7	153.4	156.3	161.4	160.7	160.6	162.7
	Nov	161.8	160.6	161.5	163.5	169.7	169.0	169.4	170.7
	Dec	166.1	165.8	165.4	167.1	174.8	174.7	174.4	175.1
1991	Jan	168.3	167.9	168.1	168.9	177.5	176.9	178.3	177.6
	Feb	170.6	170.0	169.8	171.9	180.2	179.3	180.2	181.1
	Mar	172.9	171.1	172.7	175.2	183.5	180.9	184.8	185.7
	Apr	180.9	179.7	179.3	183.5	195.5	193.9	194.8	197.6
	May	188.8	187.8	187.8	190.9	201.5	199.8	201.6	203.4
	Jun	208.1	204.5	206.4	213.8	227.8	222.2	227.0	234.3
	Jul	219.2	215.0	218.3	225.2	240.6	234.5	241.1	247.0
	Aug	228.3	224.2	227.9	233.9	250.7	245.0	251.7	256.4
	Sep	236.8	232.4	236.3	424.8	258.5	251.9	260.5	264.7
	Oct	257.5	252.9	256.9	263.9	281.7	276.8	283.0	286.4
	Nov	278.9	273.2	279.2	286.0	304.1	297.9	304.2	310.8
	Dec	299.3	294.6	300.9	304.6	322.1	316.5	324.5	327.0

		ALL	GROUP				FOOD	AND	DRINK
Year	Mo.	Jamaica	Kingston	Other Towns	Rural Areas	Jamaica	Kingston	Other Towns	Rural Areas
1992	Jan	315.3	311.9	317.0	318.6	339.5	336.4	342.9	340.9
	Feb	339.6	336.7	341.6	342.2	369.9	369.7	372.4	368.7
	Mar	355.7	353.1	356.2	358.9	388.4	389.3	389.5	386.8
	Apr	376.2	371.2	377.6	382.0	413.2	412.4	414.7	413.3
	May	387.0	379.8	392.6	393.1	424.8	422.1	430.4	424.7
	Jun	389.9	381.8	393.5	398.3	425.4	422.0	429.2	427.2
	Jul	399.7	391.9	399.0	410.2	431.4	426.2	428.7	438.6
	Aug	403.6	395.8	403.8	413.6	435.1	429.9	436.1	440.1
	Sep	410.2	401.2	410.7	421.7	440.8	434.6	442.1	446.8
	Oct	412.2	403.8	412.1	423.1	443.3	439.5	443.0	447.5
	Nov	417.3	406.8	418.0	430.5	449.3	443.4	448.2	456.3
	Dec	419.6	409.6	419.2	432.8	452.1	448.3	448.5	458.2
1993	Jan	423.2	414.2	422.5	435.5	455.5	453.0	451.8	460.3
	Feb	425.2	415.1	426.8	437.3	457.0	453.3	456.4	461.4
	Mar	430.7	418.8	432.1	445.5	462.4	456.1	459.7	470.9
	Apr	435.5	423.6	436.7	450.4	464.7	460.0	461.0	471.9
	May	442.8	433.9	442.0	455.0	467.3	465.3	461.9	472.5
	Jun	447.8	437.7	446.9	461.6	473.7	470.1	467.9	480.9
	Jul	466.0	456.9	464.4	478.9	497.4	496.1	491.3	502.1
	Aug	481.9	473.6	482.7	492.3	517.5	516.6	517.3	518.6
	Sep	502.3	494.0	504.4	511.9	543.1	543.3	543.4	542.8
	Oct	514.6	506.6	517.7	523.1	558.8	559.8	560.5	556.7
	Nov	531.2	524.2	530.9	540.5	580.2	582.7	578.5	578.5
	Dec	546.0	538.4	545.3	556.3	595.8	601.2	588.2	594.0
1994	Jan	558.9	549.4	560.9	570.1	607.9	608.2	604.3	609.6
	Feb	578.0	568.6	578.9	589.6	632.5	633.8	629.1	632.9
	Mar	590.4	580.8	589.2	603.8	649.1	649.7	643.3	651.6
	Apr	601.6	591.7	600.2	615.5	664.5	666.2	657.3	666.6
	May	616.1	606.0	613.3	631.0	685.2	688.0	676.2	687.1
	Jun	629.8	617.9	627.4	646.7	704.4	704.4	697.3	708.4
	Jul	650.5	637.9	650.3	667.0	724.8	720.5	719.5	732.2
	Aug	666.4	656.9	664.3	680.1	737.1	736.4	730.7	741.3
	Sep	673.5	664.9	671.2	686.1	741.1	739.9	737.1	744.6
	Oct	682.5	673.4	679.7	696.1	747.3	747.7	740.3	750.8
	Nov	687.3	676.7	683.5	703.4	752.4	750.0	743.9	759.6
	Dec	692.3	681.7	688.6	708.4	757.6	754.9	751.2	763.9
1995	Jan	701.2	690.8	695.8	718.0	767.9	765.6	758.5	775.7
	Feb	709.2	696.6	703.2	729.4	777.9	773.9	765.0	789.4
	Mar	715.8	701.8	709.6	737.8	786.2	782.2	771.9	798.5
	Apr	723.5	710.9	717.1	743.9	794.8	794.1	779.8	803.9
	May	733.7	722.1	725.7	753.7	807.5	809.8	791.1	813.9
	Jun	740.9	729.6	733.7	760.0	816.1	818.5	800.8	821.8
	Jul	753.5	741.9	748.8	771.6	831.1	833.5	818.2	835.6
	Aug	766.4	753.2	760.8	787.0	848.9	849.6	834.9	855.8
	Sep	789.2	775.5	786.2	808.8	878.3	881.3	866.2	881.7
	Oct	810.3	799.0	809.2	825.8	902.6	909.0	889.3	903.0
	Nov	833.0	823.2	834.4	845.1	934.5	946.3	923.1	927.9
	Dec	869.3	851.4	876.4	888.2	966.6	968.8	959.1	968.4
1996	Jan	892.1	871.1	902.2	913.3	990.4	987.0	982.7	998.4
	Feb	921.4	895.8	934.3	946.7	1,013.2	1,005.4	1,010.8	1,023.0
	Mar	936.3	910.3	947.1	963.6	1,028.1	1,023.1	1,015.9	1,040.2
	Apr	948.8	922.8	958.3	976.8	1,037.5	1,032.3	1,020.9	1,052.3
	May	960.0	940.5	973.1	977.3	1,041.6	1,043.0	1,033.1	1,044.6
	Jun	963.6	943.7	978.4	980.6	1,044.8	1,048.1	1,039.4	1,044.1
	Jul	970.3	948.7	985.0	989.5	1,045.3	1,042.7	1,042.6	1,049.5
	Aug	978.4	959.1	989.0	997.1	1,055.3	1,057.3	1,044.7	1,058.9
	Sep	989.4	966.6	1,001.8	1,011.5	1,063.1	1,058.3	1,053.9	1,073.5
	Oct	99437	975.7	1,003.2	1,014.2	1,069.6	1,072.6	1,055.8	1,074.0
	Nov	999.0	981.8	1,003.6	1,018.5	1,076.1	1,081.6	1,054.2	1,082.2
	Dec	1,006.9	992.3	1,006.1	1,026.4	1,083.1	1,094.5	1,056.0	1,085.7

Year	Mo.	ALL GROUP				FOOD AND DRINK			
		Jamaica	Kingston	Other Towns	Rural Areas	Jamaica	Kingston	Other Towns	Rural Areas
1997	Jan	1,012.8	1,002.1	1,008.5	1,029.5	1,079.3	1,092.9	1,048.2	1,081.5
	Feb	1,022.3	1,010.5	1,011.5	1,044.3	1,091.3	1,103.9	1,048.3	1,101.2
	Mar	1,025.5	1,014.9	1,016.2	1,045.0	1,091.3	1,105.0	1,054.8	1,096.5
	Apr	1,031.6	1,020.0	1,027.1	1,049.7	1,092.8	1,105.4	1,065.6	1,094.0
	May	1,039.5	1,027.7	1,030.4	1,060.5	1,100.6	1,115.4	1,061.9	1,105.6
	Jun	1,043.4	1,029.7	1,034.2	1,066.9	1,102.4	1,109.9	1,065.4	1,114.5
	Jul	1,055.0	1,043.2	1,048.1	1,074.6	1,120.5	1,132.2	1,089.0	1,125.2
	Aug	1,069.3	1,052.5	1,066.7	1,092.8	1,144.7	1,146.8	1,122.0	1,154.9
	Sep	1,084.5	1,071.0	1,079.3	1,105.3	1,164.9	1,173.9	1,136.4	1,170.9
	Oct	1,094.0	1,077.4	1,091.5	1,117.3	1,178.6	1,182.3	1,155.0	1,187.5
	Nov	1,100.2	1,083.5	1,091.6	1,127.2	1,188.5	1,192.1	1,155.1	1,203.0
	Dec	1,099.2	1,086.1	1,089.3	1,122.3	1,179.8	1,186.5	1,145.2	1,191.6
1998	Jan	1,106.8	1,101.2	1,090.1	1,124.6	1,183.8	1,196.0	1,143.0	1,192.9
	Feb	1,107.5	1,105.2	1,089.7	1,121.6	1,181.0	1,197.8	1,141.4	1,184.4
	Mar	1,115.9	1,113.9	1,095.7	1,130.9	1,188.8	1,203.5	1,147.3	1,195.5
	Apr	1,119.8	1,123.0	1,093.1	1,132.5	1,190.4	1,213.7	1,122.0	1,191.6
	May	1,129.0	1,133.5	1,100.7	1,140.5	1,196.6	1,226.6	1,138.7	1,195.6
	Jun	1,149.2	1,152.4	1,124.1	1,160.5	1,201.9	1,231.6	1,153.4	1,196.2
	Jul	1,162.4	1,162.6	1,145.6	1,172.5	1,219.4	1,246.0	1,180.7	1,211.7
	Aug	1,174.5	1,168.3	1,161.1	1,190.9	1,235.8	1,249.6	1,203.3	1,238.5
	Sep	1,175.8	1,176.0	1,155.4	1,188.0	1,228.5	1,247.3	1,189.3	1,229.5
	Oct	1,172.0	1,169.8	1,153.2	1,186.5	1,217.9	1,229.5	1,182.7	1,224.5
	Nov	1,173.2	1,171.4	1,151.9	1,188.6	1,215.4	1,226.7	1,177.1	1,224.0
	Dec	1,185.5	1,183.2	1,162.5	1,202.6	1,226.6	1,244.0	1,193.0	1,225.9
1999	Jan	1,189.9	1,186.2	1,165.0	1,210.3	1,228.0	1,238.9	1,191.8	1,236.0
	Feb	1,176.8	1,180.4	1,147.5	1,190.1	1,210.8	1,230.0	1,167.3	1,213.9
	Mar	1,182.5	1,189.8	1,154.0	1,190.6	1,202.0	1,221.6	1,159.0	1,204.4
	Apr	1,179.9	1,187.0	1,149.7	1,189.2	1,197.5	1,219.8	1,148.9	1,199.8
	May	1,190.6	1,192.4	1,157.5	1,208.6	1,208.1	1,219.3	1,156.7	1,224.2
	Jun	1,205.9	1,205.4	1,171.5	1,227.8	1,228.7	1,237.8	1,177.3	1,247.0
	Jul	1,220.4	1,220.6	1,189.7	1,239.2	1,243.7	1,250.9	1,201.7	1,259.1
	Aug	1,234.3	1,234.0	1,201.2	1,255.1	1,251.0	1,259.5	1,200.1	1,269.5
	Sep	1,137.6	1,242.7	1,204.8	1,251.2	1,245.3	1,261.3	1,195.0	1,255.4
	Oct	1,247.5	1,255.3	1,211.7	1,259.3	1,259.9	1,281.2	1,203.8	1,267.5
	Nov	1,259.9	1,262.8	1,232.0	1,273.3	1,268.1	1,291.2	1,218.3	1,270.2
	Dec	1,265.9	1,270.1	1,237.3	1,277.7	1,274.3	1,300.2	1,221.9	1,274.8
2000	Jan	1,268.1	1,271.8	1,240.7	1,280.0	1,274.5	1,298.9	1,222.4	1,276.6
	Feb	1,273.1	1,279.2	1,244.9	1,282.6	1,271.7	1,299.0	1,214.6	1,273.2
	Mar	1,281.7	1,288.3	1,251.9	1,291.5	1,281.4	1,310.8	1,223.9	1,280.9
	Apr	1,294.4	1,301.1	1,262.5	1,305.6	1,301.0	1,331.8	1,242.6	1,299.6
	May	1,300.0	1,301.3	1,273.9	1,314.4	1,305.3	1,326.2	1,254.7	1,310.4
	Jun	1,311.4	1,316.8	1,284.4	1,321.1	1,320.3	1,346.6	1,272.9	1,317.7
	Jul	1,324.0	1,328.4	1,298.8	1,333.8	1,340.6	1,362.3	1,299.3	1,339.7
	Aug	1,335.9	1,342.8	1,311.4	1,341.9	1,357.0	1,378.7	1,323.4	1,351.8
	Sep	1,349.3	1,360.9	1,312.0	1,357.1	1,364.7	1,388.1	1,310.6	1,369.0

Appendix G. Codes not in the Questionnaires

Parish Codes
1 Kingston
2 St. Andrew
3 St. Thomas
4 Portland
5 St. Mary
6 St. Ann
7 Trelawny
8 St. James
9 Hanover
10 Westmoreland
11 St. Elizabeth
12 Manchester
13 Clarendon
14 St. Catherine

Area Codes
1 KMA (Kingston Metropolitan Area)
2 Other Towns
3 Rural Areas
4 Spanish Town*
5 Portmore*

*Spanish Town and Portmore are part of KMA but in 1998 can be analyzed separately.

Relationship Codes
1 Head
2 Spouse/partner
3 Child of head or of spouse
4 Spouse of child
5 Grandchild
6 Parent of head/spouse
7 Other relative
8 Helper/domestic
9 Other not relative

Industrial and Occupational Classifications at One-Digit Level (Adopted for Labor Force Surveys 1988 to 2000)

The detailed industrial and occupational classifications used in the Labor Force Survey are available from the Statistical Institute of Jamaica or The World Bank (as listed in Appendix C). The classifications are not directly comparable to the International Classification (ISIC) at the three or four digit levels. Two digit classifications are, however, directly comparable. The one-digit codes are printed here.

Industrial Classification Codes 1988-2000
0 - Agriculture, Forestry and Fishing
1 - Mining, Quarrying and Refining
2/3 - Manufacturing
4 - Electricity, Gas and Water
5 - Construction and Installation

6 - Wholesale and Retail Trade, Hotels and Restaurants
7 - Transport, Storage and Communications
8 - Financing, Insurance, Real Estate and Business Services
9 - Community, Social and Personal Services

Occupation Codes

1988 to July 1993

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

July 1993 to 2000

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

School Administrators Questionnaire

Type of School
CLASS 1
CLASS 2
CLASS 3
CLASS 4
NOG (construction material) Walls of concrete without steel reinforcements, e.g. walls reinforced by wooden frames with concrete filling.
NUTRIBUN (school food) Nutribun is a fortified bread product. Nutribuns and a pint of flavored milk are distributed to 120,000 students daily in a school feeding program.
CEE (Common Entrance Exam)
CXC (Caribbean Examinations Council)
CGE "O" Level Exams
CGE "A" Level Exams
ALL AGE Schools

Health Facilities

Type I Health centers: The basic unit; staffed by a midwife and two community aides. The population served, 4000-5000 is provided with MCH services including home visits for children and the elderly.

Type II Health centers: A more fully staffed health center with a public health nurse, public health inspector, and a registered nurse. The District Medical Officer and the dentist visit the center on a scheduled basis. The population served is approximately 10000-12000.

Type III Health centers: The basic administrative unit of the PHC system is the district where the Type III health center is located. The staff includes the physician who is the District Medical Officer, a dentist, a nurse practitioner, a public health nurse, and an inspector. The population served ranges from 16000 to 20000.

Type IV Health centers: Sometimes the district health center is located in the parish office of the main town or on the campus of the parish hospital, in which instance it is designated a Type IV health center. The staff and services are the same as those in a Type III facility.

Type V Health centers: A large comprehensive health center in a major urban area. Has a large staff of health professionals offering a wide array of preventive, promotive, and curative services. Currently there is one Type V health center in Kingston and another in Montego Bay.

Type A Hospitals: Full range of secondary and tertiary care

Type B Hospitals: Include specialist services in some areas

Type C Hospitals: Basic inpatient and outpatient care in medicine and Maternal and Child Health

Appendix H. Consumption Aggregate Calculation—STATIN/PIOJ Methodology

There are some differences in the approach of STATIN and World Bank in annualisation of expenditure data and generation of consumption aggregates. These are:

(i) Wherever two reference periods were prescribed for collecting the expenditure on an item and the data was reported (and reliable) for both periods, STATIN uses an average of both the short and long period expenditures. The average is compiled as a simple arithmetic average of (a) short period expenditure and (b) the long period expenditure minus the short period expenditure divided by the number of short periods in the long period minus the short period. This average is used in working out the annualized expenditure. (This method is explained in an algorithm in a latter paragraph);

(ii) STATIN compiles only two aggregates- one on aggregate consumption and the other on total household expenditure (that is, consumption plus non-consumption expenditures);

(iii) STATIN does not include in its aggregates any imputed value of service by durable goods in the possession of the household (corresponding to DURSERV in the World Bank aggregation) or imputed rents and house repairs; and

(iv) the approach to owner occupied houses is the same as followed for other aggregates in STATIN, that is, the expenditure on mortgage payments, property taxes and household operational expenses and utilities are taken as housing expenditure.

Identification Variables

The identification variables, namely, PARISH, CONSTITUENCY, ENUMERATION DISTRICT NUMBER, AREA (i.e KMA, other Towns and Rural areas), DWELLING NUMBER, HOUSEHOLD # IN DWELLING, EDWGHT (weight for non-response at ED level), PARWGHT (weight for differences in sampling fraction to be applied at parish level) were given in the dataset REC001.

Annualized Expenditure Dataset

For SLC 88 and SLC 89-1, the datasets available in STATIN/PIOJ are copies obtained from the World Bank. For SLC 89-2, the annualized STATIN's expenditure data was given in the dataset EXPENDIT; while for SLC 90, SLC 91, SLC 92, SLC 93, SLC 94, SLC95, SLC96, SLC97, SLC98, SLC99, and SLC2000 it was given in dataset ANNUAL. The following table gives the list of variables in STATIN's datasets on annualized household expenditure data, with a brief description of each variable.

Contents of STATIN's Consumption Aggregate Dataset 1991-1994

Variable Name	Description
1 SERIAL	Household Identification
2 T_MEAL	Annual Purchased Meal Expenditure
3 T_NONCOM	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 RENT	Annual Rent Expenditure
10 UTILITY	Annual Utility Bill (TOT_WAT + ELECTRIC + TOT_TELE)
11 T_HHEXP	Annual Expenditure on Household Operational Expenses
12 HOUSING	Annual Housing Exp (RENT + TOT_MORT + TOT_TAX + T_HHEXP + UTILITY)
13 T_NFOOD	Annual Non-Food Consumption Expenditure (excluding Housing)
14 NON_FOOD	Annual Non-Food Expenditure (T_NFOOD + HOUSING)
15 T_FOOD	Annual Food Expenditure (Purchased + Home Production/Gift Food)
16 TOT_FOOD	Annual Food Expenditure (T_FOOD + T_MEAL)
17 CONS	Annual consumption Expenditure (TOT_FOOD + NON-FOOD)
18 HHSIZE	Household Size - Number of Members in the Household
19 PERCAP	Per Capita Annual Consumption
20 TOT_EXP	Annual Expenditure (CONS + T_NONCON)

Contents of STATIN's Consumption Aggregate Dataset 1995-99

Variable Name	Description
1 SERIAL	Household Identification
2 PARISH	Parish Number
3 CONST	Constituency Number
4 DISTRICT	Enumeration District Number
5 EDWGHT	Non-Response Weight for ED
6 DWELLING	Dwelling Number
7 HH	Household Number in Dwelling
8 HHSIZE1	Household Size - All Individuals
9 HHSIZE2	Household Size - Members Only
10 T_MEAL	Annual Purchased Meal Expenditure
11 TOT_TAX	Annual Property Tax Payment
12 TOT_WAT	Annual Water Bill
13 ELECTRIC	Annual Electricity Bill
14 TOT_TELE	Annual Telephone Bill
15 TOT_MORT	Annual Mortgage Payment
16 RENT	Annual Rent Expenditure
17 TCGIFT	Annual Value of Gifts of Non-Food Consump.
18 HOMEGIFT	Annual Value of Home Produced and Gift Food
19 TOTGIFT	Annual value of Gifts of Food and Non-Food Consumption
20 UTILITY	Annual Utility Bill (TOT_WAT + ELECTRIC + TOT_TELE)
21 HOUSING	Annual Housing Expenditure (RENT+TOT_MORT+TOT_TAX+UTILITY+HOUSEHOLD OPERATIONAL EXPENDITURES)
22 NON_FOOD	Annual Non-Food Expenditure (Purchased +TCGIFT+HOUSING)
23 TOT_FOOD	Annual Food Expenditure (Purchased + HOMEGIFT)
24 CONS	Annual Consumption Expenditure (TOT_FOOD + NON-FOOD)
25 PERCAP1	Per Capita Annual Consumption (All Individuals)
26 PERCAP2	Per Capita Annual Consumption (Members Only)
27 T_NONCON	Annual Non-Consumption Expenditure
28 TOT_EXP	Annual Expenditure (CONS + T_NONCON)
29 POPDEC	Per Capita Population Decile
30 POPQUINT	Per Capita Population Quintile
31 AREA	Area Codes for KMA, Other Towns and Rural (95-97 only)
32 REPAIRS*	Annual Expenditure on Repairs (97-98 only)
33 FINWGHT	(98 only)
34 PARWGHT	Parish weight (98 only)

Expenditure Modules

The parts of the questionnaire in which the household consumption and non-consumption expenditures were collected in SLC 89-2 to SLC 2000 are shown in the table below.

Household Expenditure Modules

Year	Daily Expenses	Consumption	Non-consumption	Food Expenses	Home Production/Gifts
1989-2	E	F	G	H	I
1990	D	E	F	G	H
1991	D	E	F	G	H
1992	E	F	G	H	merged in H
1993	E	F	G	H	merged in H
1994	E	G	H	F	merged in F
1995	E	G	H	F	merged in F
1996	E	G	H	F	merged in F
1997	E	G	H	F	merged in F
1998	E	G	H	F	merged in F
1999	E	G	H	F	merged in F
2000	E	G	H	F	merged in F

The items covered under household expenditures in SLC 89-2, SLC 90 and SLC 91 were identical. Under Daily Expenses, there are 6 items for which purchases will be more frequent and, therefore, a reference period of 7 days was prescribed for collection of the expenditure data. Under Non-Food consumption 41 items or item groups were specified; and two reference periods (past 4 weeks and past 12 months) were prescribed for collection of expenditures, though for some items, the long period was blocked, leaving only one quotation. This module also provided for collecting value of non-food gifts received during past 12 months. Under food expenses, 46 items were specified with two reference periods (past 7 days and past 4 weeks). Under home production and gift food, 16 items were specified with two reference periods (past 7 days and past 4 weeks) for home production and one reference period (past 4 weeks) for gift food. Under non-consumption expenditures, there were 10 items with two reference periods (past 30 days and past 12 months).

In SLC 92, however, some major changes were made in the expenditure modules. These are:

(i) The reference period of 4 weeks was changed to past 30 days;

(ii) The one item on personal care expenditures under Daily Expenses module was split into three items and placed in Consumption module;

(iii) Car insurance, health insurance and motor vehicle taxes and duties shifted from non-consumption module to Consumption module;

(iv) Horse racing and gambling were added to the Non-consumption module and taxes (not elsewhere classified) was omitted;

(v) The home production/food gifts module was merged in the food expenses module and the home production/gift expenditures were collected uniformly for all food items; and

(vi) The 8 items under meat, poultry and fish were expanded to 13 items and a few more items added to the food expenses module to facilitate nutritional studies.

Consequent to these changes, there was not only a change in the part identification numbers in SLC 92, but also in the total number of items covered in each part. Part E, Daily Expenses covered in SLC 92, 6 items with a reference period of past 7 days; part F, 48 items with reference periods of past 30 days and past 12 months (in case of gifts only one reference of past 12 months); part G, 9 items with two reference periods of past 30 days and past 12 months. In part H food expenses, there were 55 items. There were distinct questions seeking information on: (a) value of purchased food; (b) imputed value of home production consumed; and (c) imputed value of gift food. Two reference periods were prescribed, namely, last 7 days and last 30 days. In the case of gifts, however, there was only one reference period, namely, last 30 days.

The SLC 93 expenditures modules are identical to SLC 92 with the following exceptions:

(i) More detailed information on meals taken away from home was collected under Daily Expenses;

(ii) An item regarding purchases for special occasions was added to the Non-Food Consumptions Expenditures module; and

(iii) An item regarding taxes and duties not elsewhere classified was added to the Non-Consumption Expenditures module.

The SLC 94 through 99 expenditure modules are identical to SLC 93. In 1994 there were, in addition, two experimental modules included in the survey (see Appendix J). In 2000 more detailed information on meals taken away from home was again collected.

Annualisation of Expenditure Data

The following paragraphs describe the procedures followed in annualizing the expenditures and grouping the data by commodity groups and sub-groups.

Single Quotation

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;
lt- long period expenditure; lp- long period;

'.'- 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.
```

Commodity Groups and Sub-Groups

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 subgroup in SLC 89-2 to SLC 99 are shown in the following table.

In SLC 91, the expenditures on four additional food items were collected on a supplemental module. These were bamy (cassava bread); dry peas and beans; ackee; and avocado. These are given codes 447 to 450 seriatum. These codes will figure only in SLC 91.

Items included in Commodity Groups and Sub-Groups

Group/sub-group	SLC89/2 - 91	SLC 92	SLC 93	SLC 94-99
Commodity Groups				
1 Food and beverages	given below	given below	given below	given below
2 Fuel and household supplies	102-105, 201-205, 209	102-105, 204-208, 212	101-104, 204-208, 212	102-105,304-308,312
3 Housing and household operational expenses	206-208	209-211	209-211	309-311, (+rent+ utilities+mortgage+ p. tax)
4 Household durable goods	210-218	213-221	213-221	313-321
5 Personal care	106	201-203	201-203	301-303
6 Health care	219, 220	222-224	222-224	322-324
7 Clothing and footwear	221-227, 231	225-231, 235	225-232	325-332
8 Transportation	232-235	236-242	238-244	338-344
9 Education	228, 230	232-234	233-235	333,335
10 Recreation	236-239	243-246	236-237, 245-246	336,337,345,346
11 Miscellaneous consumption	107, 229, 240, 241	106, 233, 247, 248	105, 234, 247-249	106,334,347-349
Subgroups under food				
1 Meat, poultry and fish	401-408, 501, 503, 505	401-413	401-413	201-213
2 Dairy products	409-416, 506, 509, 511, 512	414-420, 455	414-421	214-221
3 Oils and fats	417	421	422	222
4 Cereals and cereal products	418-423, 448	422-424, 426-430	423-425, 427-431	223-225,227-231
5 Starchy roots and tubers	424-427, 447, 521-524	425, 431-434	426, 432-435	226,232-235
6 Vegetables	428, 429, 449, 525	435-437	436-438	236-238
7 Fruits	430-432, 450, 529	438-440	439-441	239-241
8 Sugar/sweets	433, 434, 532	441-442	442-443	242,243
9 Miscellaneous food	435-443, 539, 541	443-451	444-452	244-252
10 Beverages	444-446	452-454	453-455	253-255
11 Meals away from home	101	101	Block E1	101

Appendix I. Use of the CAT Achievement Test Scores

The Math Computation and Reading Comprehension tests of Form E of the California Achievement Test (CAT) were administered by trained Jamaican examiners to children in grades two through thirteen from the JSLC households. This appendix describes the scores that are available, provides guidelines for using the scores, and sets forth the procedures for requesting access to the JSLC CAT data (CATSTU).

Available Scores

The CATSTU data file includes a student identification code consisting of variables PARISH, CONSTIT, ENUMDIS, DWELL, HHLD, and PID that correspond to variables of the same name in the household cover and roster modules. It also includes the following variables derived from information on the CAT answer booklets or sheets: student AGE, SEX, GRADE, an indicator of whether the student was tested in March or September of 1991, and scale scores for Math Computation and Reading Comprehension.

To obtain the achievement test scores efficiently and with enhanced precision, a short screening test was used to determine the appropriate level of the CAT to administer to each student. Then, the student's achievement was assessed using a level of the test composed mostly of test questions that were at or near the student's level of academic functioning, with fewer extremely difficult or extremely easy test questions. After the testing was completed, tests were scored and for each child the number correct for each test was converted to a scale score.

Scale Scores and their Use

Scale scores are units of a single, equal-interval scale that is applied across all levels of the CAT-Form E regardless of grade or time of year of testing. These scores are expressed in numbers that range from 0-999. The continuity of the scale is based on the design of the norming sample, which required that special test forms containing items from adjacent test levels be administered to randomly selected samples in grades where the levels overlap. This procedure provided a basis for linking the tests from level to level (i.e., vertical equating). A given student is expected to obtain the same scale score regardless of the level administered. However, the standard error of measurement associated with the student's score will be smaller if the student is administered the level indicated by the screening test.

The equal-interval property of scale scores makes these scores especially appropriate for various statistical purposes. For example, scale scores (unlike percentiles or grade equivalents) can be added, subtracted, and averaged across test levels.

Scale scores do not take into account the child's grade level or age at the time of testing. Two children with the same number correct on a given level of the test will receive the same scale score even if the two children are from different grade levels. Therefore, when making comparisons involving children of different ages or grade levels, it is important to control for grade level or age at the time of testing.

The AGE and GRADE variables on the CATSTU data file are the most accurate source of these data. The AGE variable that is on the CATSTU data file was calculated using the child's birthdate and the date of testing. The GRADE variable that is on the CATSTU data file was based on information obtained from the school at the time of testing. Children from the first administration were tested in March 1991. For these children, the most accurate representation of their grade at the time of testing would be equal to (GRADE + .8). The .8 refers to the fact that these children had completed 8/10 of the school year at the time of testing. The second administration took place in September 1991. For these children there is no need to add a correction because less than one month of the school year had elapsed at the time of testing.

Because the test content areas are "scaled" separately, scale scores for Reading Comprehension cannot be compared directly with scale scores from Math Computation. For example, a scale score of 440 in Reading Comprehension cannot be interpreted to be "better" than a scale score of 420 in Math Computation. A more meaningful comparison would be to evaluate the score in relation to the average for other same-age students.

Words of Caution

While the CAT scores are useful for making comparisons among children in the JSLC sample, it is not appropriate or valid to use these data to make comparisons between Jamaican children and children in the United States norming or standardization group. Children in the JSLC sample were tested under circumstances less likely to reflect their best performance than were children in the US norming sample. For example, unlike children in the US sample, the Jamaican children faced more physical distractions, were tested by administrators unknown to them, were not prepared in advance to come well-rested, and they took only a small portion of the full test battery. US-Jamaican comparisons using the JSLC data would be invalid and unethical.

Procedures for Requesting Access to CAT Data

Principles of test use set forth in the *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1985 revised edition) advise that test users (in this case the Government of Jamaica) have a responsibility to guard against the misuse or misinterpretation of test data including making sure that access is permitted "only to those individuals who have the training and experience necessary to handle this responsibility in a professional and technically adequate manner." For this reason, decisions on whether to release the CAT data will be made on a case by case basis, based on the appropriateness of the proposed use and the qualifications of the party requesting the data. To request use of the data, complete the application form that is provided at the end of this appendix and then follow guidelines for obtaining JSLC data that are found in Appendix A. Include the completed application with your request.

Application for Access to JSLC Achievement Test Data

Please print or type:

Name of applicant[32]:
_____

Title or Position: _____

Affiliation: _____
Address: _____

_____

Phone Number(s): _____

Training/experience in Testing/Measurement/Statistics: _____

_____

_____

_____

Please describe in detail the specific uses you intend to make of the CAT data. Attach additional sheets, as necessary.

I certify that I have a knowledge of measurement principles and of the limitations of test score interpretations. I further certify that I will abide by the principles of test use as set forth in the Standards for Educational and Psychological Testing[33].

Signature _____ Date _____

Signature of faculty supervisor (if appropriate): _____

Please return this form with the information requested in Appendix A.

[32] If applicant is a student, the name, title, and signature of the supervising professor should be included as well.

[33] This publication is available from the American Psychological Association, Order Department, 1200 Seventeenth St. NW., Washington, DC 20036 USA

Appendix J. Experimental Consumption Modules

I. THE DESIGN

Introduction

In SLC 94, conducted in November 1994, the focus was on testing two shortened versions of the household consumption expenditure modules, to find out 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[34] on SLC 94. The following paragraphs describe briefly the salient aspects of the experimental consumption modules.

Point of Purchase Module

The two alternate shortened versions of the consumption modules were designated as: (a) point of purchase module; and (b) 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 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 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 the 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 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

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

The main factors in grouping the items were to produce groups meaningful to respondents and for which it would also be easy to make 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, kerosene), detailed disaggregated questions remained. The total number of items in these modules were 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.

[34]Jamaica Survey of Living Conditions Report, 1994. PIOJ/STATIN.

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

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

Since canvassing 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, 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.

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 labeled 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.

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

The standard modules and the 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 by having answered the first set of modules earlier. 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 are shown below. The order was specified on the upper right hand corner of the cover page of the questionnaire.

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) than they appeared in the questionnaire.

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 Expenditures (Part E)	Point of Purchase Module (Part M)
Food Consumption Expenditures (Part F)	Food Stamps (Part I)
Consumption Expenditures (Part G)	Housing (Part J)
Non-Consumption Expenditures (Part H)	Durable Goods (Part K)
Food Stamps (Part I)	Miscellaneous Income (Part L)
Housing (Part J)	Daily Expenditures (Part E)
Durable Goods (Part K)	Food Consumption Expenditures (Part F)
Miscellaneous Income (Part L)	Consumption Expenditures (Part G)
Point of Purchase Module (Part M)	Non-Consumption Expenditures (Part H)

The shortened item by item consumption module, however, was canvassed on a different sample of households than the one canvassed with the standard consumption modules, because it was derived from the same pattern of commodity groupings as the standard modules 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 from the two panels covered in the July LFS, but replaced in the October 1994 LFS.

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.

The layout of this appendix is as follows. In the next section, 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 the module. In Section IV, the time taken for canvassing the three types of consumption modules is discussed.

II. POINT OF PURCHASE MODULE

The Module

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/gasoline 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, pharmacies and drug stores, furniture, furnishings etc stores, household appliance stores, market/arcade vendors, books, stationery and newspapers 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, personal services, repair services, and other services.

Data Entry/Cleaning

Before data entry, the questionnaires were edited and coded and all clerical errors were removed at this stage. All partially complete or incomplete questionnaires, in terms of the standard modules, were removed from data entry operations.

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

The cleaning process for the point of purchase module was taken as a separate operation, after preparation of the SAS data sets. The consumption expenditure data collected in Part M, that is, the point of purchase module, was annualized. The method followed was identical to that adopted for annualizing 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 calculated. 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 of these four variables.

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 questionnaires were examined further. Out of these, 15 questionnaires with nil or negligible values in Block M1, which covers all food purchases, were rejected; 9 questionnaires with clerical errors corrected; and the remaining 38 were accepted.

Of the 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

The data set ANNUAL_P gives 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 expenditures from the standard consumption module to facilitate comparisons for the 941 households used in the analysis of point of purchase module.

The Estimates

Table II.1 below shows the mean per capita consumption estimated from the point of purchase module and the corresponding estimate from the standard consumption modules for the three regions.

Table II.1 Mean Per Capita Consumption by Area and by Standard or Point of Purchase Modules, SLC 94

	Regions			
Item	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	27,600	38,409	27,248	20,215
Imported from Standard Modules				
Housing	3,227	5,362	3,560	1,605
Home Gifts	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

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 percent for all Jamaica; (-)1.3 percent for KMA; (+)0.2 percent for Other Towns; and (-)3.0 percent for Rural Areas.

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 the point of purchase module and the standard modules were (-)2.3 percent for all Jamaica; (-)1.5 percent for KMA; (+)0.3 percent for Other Towns; and (-)4.6 percent for Rural Areas.

None of the above differences were statistically significant. The relevant standard errors of the estimates, calculated using the formulae given in the Appendices to the SLC report[35] are presented in Table II.2.

Table II.2 Standard Errors of the Mean Per Capita Estimates from the Point of Purchase and Standard Modules, SLC 94

	Point of Purchase		Standard Modules		Differences in Means		
Region	Mean Cons ($)	S.E. ($)	Mean Cons ($)	S.E. ($)	Diff. ($)	S.E. ($)	Z Statistic
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

Note: 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.

Under the hypothesis that there is no difference 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 percent of the observations are within the range ±1.96 and 99 percent within the range ±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

The order of canvassing the modules also had no effect on the estimates. The following presents the estimates for the two order described earlier.

[35]Jamaica Survey of Living Conditions Report, 1994. PIOJ/STATIN.

Table II.3 Mean Per Capita Consumption, by Order of Canvassing the Modules, SLC 94

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

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

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 percent of households, the differences are between ±20 percent and in 75 percent of households the differences are between ±30 percent. 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 II.4 below.

Table II.4 Distribution of Households According to Percentage Difference in Total Consumption According to Point of Purchase and Standard Modules, SLC 94

Percentage Difference in Estimated Consumption	Number of Households	Percent 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% - 49%	21	2.2
Plus 50% or more	55	5.8
Total	941	100.0

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 weaknesses in either of the two approaches.

III. SHORTENED ITEM BY ITEM CONSUMPTION MODULE

The Modules

As mentioned above, 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.

Since the shortened item by item consumption modules were canvassed on a different sample than the one used for the standard modules, a separate cover page to record the identification details such as parish, constituency, ED number, dwelling number and serial number of the household and a roster for recording the details of household head and other members, as in the general survey, were introduced. Thus, the questionnaire for the shortened item by item consumption modules included, apart from the cover page, the following:

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

Data Entry/Cleaning

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

Then the expenditures data reported in Parts E to H were annualized following the same methodology as for standard modules.

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

For each of these indicators, those households which fell beyond the range “plus or minus two standard deviations” were examined further. Out of these, 74 questionnaires were examined for possible discrepancies, 9 questionnaires were rejected because the data on food expenses was incomplete, 17 corrected for clerical errors, and 48 accepted.

Of the 945 households 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

The data set ANNUAL_S gives the annualized expenditure estimates from the shortened item by item consumption modules for all variables for these 936 households. This is equivalent to the data set ANNUAL, created from the standard modules, with the exception that housing expenses were excluded.

The Estimates

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 below:

III.1 Estimates of Household Size and Composition, SLC 94

	Main Survey (N=1940)		Shortened Modules (N=936)	
Item	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

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 item consumption modules. The differences in the point estimates of these variables are not statistically significant.

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 the following table.

Table III.2 Estimates of Mean Per Capita Consumption from the Shortened Modules and the Standard Consumption Modules, SLC 94

	Shortened Modules		Standard Modules		Difference		
Region	Mean Cons ($)	S.E. ($)	Means Cons. ($)	S.E. ($)	Diff. ($)	S.E. ($)	Z Statistic
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

The mean per capita estimate from the shortened item by item consumption module was 22.2 percent lower than that from the standard module for KMA; 20.3 percent for Other Towns; 19.0 percent for Rural Areas; and 10.8 percent for Jamaica. The Z scores are quite high and the differences in means are statistically significant.

Table III.3 Mean Annual Per Capita Consumption by Commodity Groups, Jamaica, SLC 94

	Shortened Modules (N=936)		Standard Modules (N=1940)	
Commodity Group	$	%	$	%
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	3,189*	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

* Imported from standard modules

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.

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.

Most of the shortfall of $6,804 in the mean per capita consumption estimate from the shortened consumption modules compared to that from the standard modules, was accounted for by the food and beverages group ($3,651), clothing and 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 expenditures on these two groups

As for the shortfall in the estimated consumption of food and beverages, the following table shows the breakdown of consumption by subgroups under food.

Table III.4 Mean Per Capita Annual Food & Beverages Consumption by Commodity Groups, Jamaica, SLC 94

Commodity Group	Shortened Modules (N=936)		Standard 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/Sweets	*		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

* Sugar included in cereals group and Sweets in miscellaneous food.

Out of the shortfall of $3,651 in the estimated consumption of food and beverages from the shortened consumption modules, $1,280 was accounted by Meat Group; $1,030 by Dairy Products Group; $437 by Starchy Roots and 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 and tubers from 4 to 1; and miscellaneous food from 9 to 1. These groups need to be examined.

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

The median time taken for canvassing the 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 pont 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 contains the housing expenses is not taken into account in all the above three estimates.

The time taken per household for canvassing the consumption modules was tabulated according to time ranges. These are presented in Table IV.1 below.

Table IV.1 Percentage Distribution of Households According to Time Taken for Canvassing the Consumption Modules, SLC 94

Canvassing time per household (minutes)	Standard Modules (%)	Shortened 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

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

V. CONCLUSION

To sum up, 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 to Meat (fresh or frozen), Dairy Products, Starchy Roots and Tubers, Clothing and Footwear, and Transport (Motor Vehicles) needs revision because the estimates of mean per capita consumption for these items were substantial underestimates compared to the corresponding estimates from the standard consumption modules.

In the case of the 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 analysis to assess the weakness in either of the two approaches.