



HOUSEHOLD EXPENDITURE SURVEY

1982

Prepared by
The Statistical Department
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Hamilton

FOREWORD

The Statistical Department wishes to acknowledge with thanks those households who willingly gave their time to ensure the success of the survey upon which this report is based. The results will be of value to most sectors of the community and of interest to many individuals.

In certain cases, because a number of alternative measures are available relating to income and expenditure, the most appropriate choice may not always be clear to the user and assistance may be needed. Readers of the report are encouraged to contact this office for advice on the use of the statistics which it contains.

Additional detail not contained in the report may exist in the Statistical Department and specific enquiries regarding availability of detail should be addressed to this office.

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HOUSEHOLD EXPENDITURE SURVEY 1982

Introduction

This report provides the principal findings of the 1982 Household Expenditure Survey. Further analysis of the data may permit the publication of more detailed results at a later stage. The results of the survey contained in this publication are, however, a fairly comprehensive reflection of the overall income distribution of Bermuda's population, and the patterns of expenditure within each of the income groups.

The results will ultimately be used to update the existing Retail Price Index in terms of reflecting more accurately the types of goods and services which are now being purchased by households, and the proportion of their expenditure which is devoted to such things as food, clothing, shelter, foreign travel, et cetera. They will also be used to provide more accurate information of consumer expenditure in the National Accounts of Bermuda.

The report contains brief sections on the sample design of the survey, survey methods, data processing, response rates, costs and major concepts used. The presentation of results falls into five parts, a) the characteristics of households taking part in the survey and an assessment of how representative they are of the total population, b) expenditure by household income groups, c) household expenditure by race and age of head of household, d) sources of income, and e) ownership of household durable goods.

Survey Methodology

I) Sample Design

The sample size was based on a balancing of survey costs and a desired level of accuracy. For the main aggregates a sample size of 576 was found necessary to produce estimates accurate to ± 5 percent at the 95 percent confidence level. However, improvements in precision were achieved by stratifying the population by housing density and parish. Density of housing was used as a proxy for income. The stratification ensured that all geographic areas of the island would be represented as well as a cross section of all income groups.

The sample of households was selected from 60 of the 241 census districts, which in turn reflected the proportional distribution of high, medium and low density housing across all census districts. Within each census district, households were selected from lists of numbered households on the basis of a table of random numbers.

The two stage random sample was, in effect, a 25 percent selection of census districts at the first stage and a 15 percent selection of households within each census district at the second stage, and yielded 750 dwelling units.

II) Survey Methods

The survey methodology up to the stage of data processing involved a number of steps, commencing in September 1981.

The basic objectives and decisions concerning concepts and definitions were undertaken initially within the Statistical Department.

Each stage was discussed with an Advisory Committee which included members of business, labour, community and other government departments.

The questionnaire design was discussed with the Advisory Committee and then subsequently tested by members of the Statistical Department with a limited number of volunteer respondents. Because the survey design was not new it was decided that the pilot testing stage could be undertaken on a very small scale. The basic design of the questionnaire had in fact been proven already in Bermuda and by most statistical agencies throughout the world.

The preparation of field instructions and editing instructions were prepared well in advance of commencement of field work and as soon as basic decisions had been made regarding questionnaire design and method of data processing.

It was decided to have a main questionnaire for all items excepting food, with a recall of one year for most items and one month for items which are bought frequently or paid for on a regular monthly basis, for example, telephone, electricity, rent. In addition each household received two one-week diaries in which to provide a detailed record of all expenditure, principally to capture detailed expenditure on food items but also to provide a check on the frequently bought household supplies such as liquid detergents, cleaners, toothpastes and other personal care products. The best method of data collection in this type of survey is the subject of much debate among

statisticians and although a variety of collection techniques have been tried, no one method is clearly superior. The method chosen, despite certain weaknesses, is probably the most widely used.

The field work was undertaken in two stages, the first in June and July, 1982 and the second in October and November, 1982. The purpose was to capture any variation in seasonal expenditure patterns, although this is not as important a factor in Bermuda as in those countries with severe climatic changes.

The interviewers were recruited as part time workers and paid on a piece work basis. Because of the high rate of participation in the labour force most families had to be interviewed in the evening or weekends. In the first round fifteen interviewers were each assigned 20 households but this proved to be too heavy a work load and in the second round, each of 30 interviewers were assigned 10 households to complete. It was necessary to have spare trained interviewers to allow for drop outs amongst those first selected.

Each interviewer received training within the Statistical Department covering the purpose of the survey, answers to likely questions, the questionnaire itself and interviewing techniques. The training was by any standards minimal. Each interviewer reported to an assigned supervisor from the Department and was required to report progress on a weekly basis.

The returned questionnaires and diaries were roughly screened by the supervisors as they were returned for completeness. In

some cases interviewers returned to respondents to clarify questions. No call back scheme was used by the supervisory staff to verify the work of the interviewing staff.

The survey was undertaken on a voluntary basis and an extensive T.V., radio and newspaper publicity campaign was mounted to ask for co-operation and to make people aware of the purpose of the survey before they were approached by the interviewing team.

III) Survey Processing

It was decided at an early stage that the survey results would be computer processed and to the greatest extent possible the questionnaire was pre-coded to facilitate data capture. Specifications of data inputs and outputs were provided to the Data Processing Centre in September, 1982, and by year-end, systems and programmes had been prepared and were ready for testing. It should not go unrecognized that the computer work was completed quickly and the testing produced desired output with minimum adjustments.

Upon receipt of questionnaires, each one was checked for general completeness. The second round of editing included calculation of shelter expenses, rounding to eliminate cents, checking the approximate validity of entries, coding such information as occupation and industry of employment. On the basis of this detailed editing some questionnaires were rejected, if for example the household contained five spenders but only three had been willing to report spending.

The diaries which accompanied the questionnaires were each scrutinized and all entries coded for machine entry. In the case of diaries, because entries were unpredictable, it was impossible to pre-code.

In some cases entries in diaries were used to verify entries in the questionnaire, for example, rents, electricity, telephone. Questionnaires were accompanied by one, two or no weekly diaries - some respondents refused to complete diaries in the detail required and some lost heart after completing one. In many instances diaries which had only a single entry covering 'all groceries' were rejected, as were some where in the judgement of the professional staff of the Statistical Department they were unrepresentative of the household. For example, an entry of only bread and milk, unless there was evidence that the meals taken out of the home compensated for home prepared foods, meant that the diary was rejected.

Upon completion of the editing and coding, data were entered into the IBM 38 main frame through a terminal located in the Statistical Department. All data entered were 100 percent verified. The advantage of in-house data capture was that the keying-in staff were able to obtain immediate advice and assistance regarding any queries.

The pre-specified output allowed tabulations to be automatically created covering, 1) expenditures by income groups and a percentage distribution, all converted to standard units of weekly expenditure,

2) the principal characteristics of households within each income group, and by sex and ethnicity of head of household, 3) the major expenditure patterns by household size, 4) detailed average weekly expenditure by specified household characteristics and 5) ownership of consumer durables by households.

The output potential permits the maximum use of data up to the limit of the sample size. In addition, a facility exists to run special analysis by file creation for specific purposes.

Data capture proceeded simultaneously with editing and coding and the first questionnaire was entered in November 1982 and capture was completed in April 1983.

IV) Survey Response

Of the 750 dwelling units originally selected, approximately one third were either vacant, or the occupants refused to participate, could not be contacted or were ineligible. In the final count 490 household questionnaires were received, of which, 47 were rejected because they were incomplete. Of the 443 useable questionnaires 48 percent of households completed diaries for two weeks and 65 percent for one week. Twenty-nine households were unwilling to provide information on income.

On the assumption that the total number of households in Bermuda amount to approximately 19,000, the sample represents a survey of 1 in every 43 households, or a 2.3 percent sample. Table 1 in the Appendix indicates that the sample was representative of the entire population

in terms of a wide variety of household characteristics, including family size, black and white heads of household, type of family structure and type of tenure of housing as measured in the 1980 Census.

V) Survey Costs

The costs of personal interview type surveys of this sort are relatively high and the following figures are provided as some indication of the price of gathering and publishing economic and social data.

Household Expenditure Survey 1982

i) Interviewer costs and training	\$24,500
ii) Advertising and printing costs	\$12,000
iii) Planning, control, editing, key punching, and analysis	\$35,000
iv) Estimated Data Processing, systems design, programming and CPU time	\$15,000
v) Miscellaneous, stationery, insurance	<u>\$ 1,000</u>
Total	<u>\$87,500</u>

Because of the need to conduct lengthy personal interviews necessitating several visits to each household, the variable costs associated with surveys of this type are high, and are a greater constraint on the sample design than might be the case in mail response surveys.

VI) Concepts and Definitions Used

In order to undertake a survey of this nature there must be agreed definitions in terms of coverage and the meaning of certain terms. The purpose of defining terms and items to be included is,

1) to ease the task of the interviewers who must be in a position to inform respondents precisely what should be reported, 2) to make each classification as homogeneous and accurate as possible, and 3) to meet the underlying objectives of the survey.

Some of the concepts are conventional and some of the definitions used are arbitrary, in the sense that they represent one of several possibilities.

Basically, the income and expenditure estimates relate to the twelve months prior to the interview.

Income is defined to include, i) gross compensation from employment including tips and commissions and before deductions such as pension and social security schemes, ii) earnings from self employment net of business expenses, iii) pensions and annuities, iv) net rental income from property ownership, v) investment income in the form of interest and dividends and vi) other kinds of regular allowances from outside the household such as alimony and support from children. Incomes specifically excluded are non-recurring lump-sum receipts such as inheritances, gifts, gambling gains, withdrawal of savings or receipts from sale of other assets, and amounts borrowed or capital loan repayments received.

One unusual item which is conventionally recorded in income in this type of survey is an amount imputed to owner-occupiers of housing, as if they were receiving rent from themselves for living in

their own premises. The identical amount also appears as part of their expenditure on housing so that it has no effect on the difference between their income and expenditure. The purpose of this entry is better explained when dealing with the concept of expenditure and will therefore be covered in the next section.

To meet the needs of both reweighting the Retail Price Index and providing new benchmarks for the National Accounts the following definition of expenditure was used in the survey. Expenditure includes all cash or credit purchases for household consumption, plus current transfers made on a regular basis out of income for such items as insurance and social security, (the total value of goods purchased on credit is included rather than just the monthly payment.) Because an attempt is being made to measure the value of goods or services being used by households, in the case of owner-occupied housing an imputed expenditure is included to cover the value of shelter consumed by the household. If a house were owned and occupied with no mortgage outstanding, there would be no measure of the value of the shelter it provided. In the case of an owner-occupier with a mortgage, although a regular outlay is occurring, this might bear little relationship to the value of service rendered by the home. Therefore, in the case of both owner-occupiers, with or without mortgage, an amount assessed to be the rental equivalent of the house is included as an expenditure item and any mortgage repayment, where applicable, is omitted.

Certain expenditures are omitted from the survey, such as those of a capital nature, including land purchases, housing, financial assets and loans made or gifts which are of sufficiently large size that they would not be made out of current income and are more in the nature of saving rather than consumption. Expenditures made on behalf of a business are excluded when a household member is running his own business, or is an independent professional, for example, doctor, lawyer. Payments from one member of a household to another are not considered expenditure of that person, nor as income of the recipient.

(Although an attempt was made to collect mortgage repayments and credit payments, split between loan repayment and interest, for purposes of the analysis of cash outflows, these items proved particularly difficult to obtain and are not contained in the report).

In principle, under the concept of measuring the value of consumption, all goods and services obtained from the productive activities of the household should be valued, including imputations for home grown food, do-it-yourself activities, and goods received in kind. As a practical matter, these were not generally covered in this survey.

The basic definition of the household refers to a person, or number of persons who combine to make provisions for meals and other necessities jointly. Each separate dwelling unit constitutes a

household, so that a house divided into several self-contained apartments represents several households.

In general, members of the household are those living on the premises for more than half the twelve month pre-survey period, including the two week diary period. Children over 16 studying abroad for most of the year are normally excluded. Persons normally resident but also temporarily away on, say, a business trip are included, but family members who have left permanently during the past year and have been away longer than six months are excluded. Short term visitors are not included as members of the household.

Certain households were considered ineligible for the survey. These included military personnel who have special buying privileges at military bases, and non-residents who make their home in Bermuda for only part of the year.

Survey Results

I) Characteristics of Sample Households

According to the survey of 414 households reporting income, the average number of persons per household was 2.74, of which each household averaged 1.58 persons working. The majority of households, 59 percent, were composed of husbands and wives with or without children, with single person and single parent households representing 27 percent. The average age of the head of household was 47 years.

Of the total sample, 75 percent of households were headed by males and 25 percent by females. Black and white/other heads of household were almost equally represented in the sample, and 251 or 61 percent were Bermuda born.

The number of households in the sample who were renting accommodation numbered 222, or 54 percent; owner-occupiers accounted for 192 households or 46 percent. The majority of heads of households sampled finished school at the secondary level, 40 percent, but 34 percent had received vocational or university training.

These averages varied depending on the income level of the household and Table 2 sets out these characteristics by income group. In general, the larger the average number of persons per household, the higher the household income, reflecting in part more adults and more workers.

The high average age of the head of household in the lowest income group reflects a significantly higher average number of retired persons.

A higher proportion of single person and single parent households are found in the lower income groups than among the two parent with children and other related households; this is also true of households headed by females in comparison with male headed households.

Table 2 shows details of the weekly household income distribution of all households in the sample and also provides a separate analysis by race of head of household and sex of head of household. Average household income for all households was estimated at \$672 per week. Just under one third of all households fell in the \$200-\$499 per week group and almost another third (30.2%) were located in the \$500-\$799 per week group. At the lowest end of the distribution, 7.7% of all households had weekly incomes of under \$200 whilst at the upper end, 5.1% of households recorded aggregate incomes of \$1,500 per week and over. Cross checks of the underlying shape of the sample distribution, using standardised percentage deviations about the mean, were made with household income before tax distributions in the United Kingdom and the USA. These comparisons indicated that the sample contained a representative mix of households over the full range of household incomes.

In terms of race of head, households headed by blacks had average household incomes of \$565 per week compared with \$791 per week for all households headed by whites. Thus an average household income

for all households headed by blacks was 71% that of all households headed by whites. Comparison by sex of head of household shows a greater differential than that by race. Households, headed by females accounted for 25% of all households, with an average household income of \$405 per week compared with \$761 for all households headed by males. Thus average household income for all female heads was 53% of that of households headed by males. A great deal of information relevant to an analysis of these observed differences has already been published in the 1980 Census which shows occupations by race and sex, extent of economic activity and educational achievement, et cetera. Further information is also provided in Table 8 of this report.

Owner-occupiers tended to be more heavily concentrated than tenants in the upper income groups. Heads of household with university training also had higher proportions in the upper income ranges than those with other levels of schooling.

II) Summary of Household Expenditure by Income

The following three points are important for a correct understanding and interpretation of the survey results:-

- a) Both household expenditure and income figures include a rental equivalent for those households whose heads were owner-occupiers of dwellings.

The basic reasons for including rent equivalents for owner-occupiers in the main summary tables are twofold, i) that to

place two households both of which have employment incomes of say \$300 per week into the same income group, when one is paying \$100 per week rent and the other nothing, distorts the relative wellbeing of the two households - it is more satisfactory for analysis to impute an expenditure and an income of \$100 per week to the owner occupier, as if he is renting his home from himself, and to classify the household into the income bracket \$400 per week. Although having identical household cash incomes, the household with no rent payments, (even if repaying a mortgage which is in general partly saving through increasing equity in the home), is 'better off' than the renter;

ii) the underlying objective of the survey is to measure all goods and services consumed by households and this requires that allowances be made for consumption for which there is not necessarily a market transaction. The rental equivalent was based on the existing ARV's in 1982 adjusted upward in the light of a detailed analysis of the relationship of current rents to ARV's which existed in 1982.

- b) Expenditure figures presented in the tables represent averages over all households in the survey and not averages for only those having expenditures on any particular item. For example, in the case of, say, women's dresses, if the sample consisted of ten households of which five showed no expenditure and the

other five indicated weekly expenditures of \$10, \$15, \$20, \$25 and \$30, the average expenditure shown would be $\frac{\$100}{10} = \10 , and not \$20 which would be derived if the total expenditures were divided only by the number of households actually buying women's dresses.

It is important to remember this point because the average expenditures may sometimes be below the expected level of household expenditure for a specific good or service. In the case of motor vehicle licences the average incorporated in the survey is \$131, well below the rate paid by most individuals, but this is due to the fact that actual amounts paid by car owners, who represented only 69 percent of the households in the sample, was divided by the total sample size to derive the average for all households. The average for those households actually reporting a motor vehicle licensed was \$190.

- c) The income groupings are based on the entire income of the household and not that of the primary 'breadwinner only'. Section IV) later in this report, looks in greater detail at household incomes, sources of income and average incomes per person working.

For all income groups (excluding those who did not state income), average weekly household expenditure amounted to \$585 with average income of \$672. The share of major items of consumption indicated that compared with

1974/75,⁽¹⁾ the proportion spent on food, had declined significantly; although meals consumed out of the home which is a component of food rose sharply, while expenditure on shelter, household goods and services, transportation and foreign travel had all increased relatively. Expenditures and percentage distributions by income groups for the main expenditure divisions are given in Table 3, with more detail being provided in Table 4. Expenditures on certain specific unpublished items are available upon request.

The cross checks applied on the actual dollar amounts of expenditure on various commodities and services, as far as it was possible to do these, appeared to verify the survey results. There is always concern that the detailed diary record-keeping necessary for measuring expenditure on food items may result in some under-reporting in this area and that there may also be some deliberate concealment of spending on alcohol and tobacco. There is, however, insufficient evidence on which to make a firm judgement on this matter and therefore no compensatory adjustments have been made to the figures. Readers should also not make the mistake of equating weekly expenditure on food with expenditures made in 'supermarkets', for quite frequently weekly 'supermarket' bills include a wide range of non-food items.

The general pattern of expenditures shown in Bermuda indicate quite a similar distribution to those of Canada and the United Kingdom but with one or two marked differences. The major differences are in lower relative spending in Bermuda on food, tobacco and alcohol, and transportation, and

(1) Report on the Bermuda Consumer Expenditure Survey of 1974/75 and the revision of the Retail Price Index.

higher relative outlays on shelter and travel. Some of these can be explained by the geographic features of the country, some by relative price differences, some by variations in survey timing, and perhaps some by differing tastes. Without more intensive study, it is not possible to pinpoint the reasons for country differences.

Not surprisingly, average expenditures in dollar terms rise as household income increases because expenditures are in general a function of income. However, the proportion of expenditure on the essentials of life tend to become relatively less significant as income rises. For example, the proportion of total expenditure devoted to food declines from 21.3 percent in the lowest income group to 11.0 percent in the highest group.

The overall average consumption outlays, excluding contributions, gifts and life insurance which were not included in the published 1974/75 results, rose from \$215 per week to \$537 per week, an increase of 150 percent. (See Table 5). Average household income also rose by 154 percent, well ahead of the 76 percent increase recorded by the Bermuda Retail Price Index over a similar period, suggesting a substantial increase in the real standard of living measured in terms of consumption of goods and services. The rise in household income reflects not only increases to keep pace with rising prices, but real gains attributable, among other things, to upward shifts in the skills and occupations of the labour force which were apparent between census years, higher participation rates in the labour force, especially by women, and in all probability some relative increase in income derived from rental of properties. Food expenditure which rose only slightly more than prices of

food indicates that there has been only a small increase in the quantity of food consumed per household. The percentage increases in expenditure shown in Table 5 point to substantial real gains in consumption of household goods and services, transportation, foreign travel and education.

The breakdown of housing expenditure contained in Table 4 shows that for those renting unfurnished units the average monthly rent was \$321 ($\74.02 per week $\times 4.33$), and for furnished accommodation \$436 ($\100.73×4.33). In the highest income bracket for which rents are available, furnished and unfurnished units monthly rents averaged \$778 and \$633 respectively. Overall owner occupied housing rental equivalents tended to be higher than rented properties, due probably to some differences in the calibre of the properties involved.

The survey results provide not only specific information about spending habits by various income groups, but also reveal a great deal about the income distribution of households in Bermuda. From the figures, aggregates can be deduced regarding the distribution of total income among various proportions of the total number of households, and relevant saving rates for the various income groups may be calculated. The figures for the two lower income groups suggest that their expenditures are partially supported by a combination of credit purchases, use of past saving or borrowing.

An analysis of the percentage of households reporting expenditures is shown for a selected group of commodities or services in Table 6. Further detail is available upon request.

III) Summary of Household Expenditure by Race and Age of Head of Household

Summary data on expenditure by black and white, male and female heads of household are provided in Table 7. The differences are the result of a complex mix of factors including occupation, family type, size of household, level of education, and it is essential to be cognizant of these factors in analysing and drawing conclusions from the figures. In general, households with black heads spent a greater proportion of their income on food, transportation and medical, health and personal care than white households, and relatively less on housing, household goods, supplies and services, foreign travel and entertainment and recreation.

Table 8 reveals that households with white female heads have on average 1.55 persons per household, of which 1.33 are adults and 0.22 children. In contrast, households headed by black females have an average of 2.78 persons, of which 1.77 are adults and 1.01 children. The average number of workers in white female headed households is 0.98 compared with 1.45 in black households. The sample also showed that 64 percent of households with white female heads were single person households and 12 percent single parent households, in contrast with 27 percent and 40 percent respectively among their black counterparts.

In households headed by males, the average number of persons per household was identical for blacks and whites at 2.90 and the average number of adults was similar at 2.19 and 2.09 respectively. Black male headed households had on average 1.78 workers and whites 1.61. In both cases the nuclear family predominated. Given the nature of the two

populations, with many white heads of household working on contract arrangements it was not surprising to find a higher rate of owner occupancy of homes among black males, 58 percent, than among whites, 42 percent. The most significant difference was apparent in the highest level of education attained, where unpublished detail showed one third of whites had attained university level as opposed to 7 percent for blacks.

Table 9 provides the pattern of expenditures among different age groups of the head of household. As indicated by the average household expenditure and income figures at the foot of the table, both incomes and expenditures rise as the heads of household move through the three age groups representing their working years. After normal retirement age, incomes fall back sharply to well below those of the other groups.

Housing looms particularly large in the distribution of expenditures of those over 65. This is explained by the importance of the imputed rent to this group, shown in the final line of the table. Home ownership in the over 65 group is relatively high and this, coupled with the fact that imputed rents tend to be higher than actual rents paid because of the calibre of owned homes, drives up the share of housing expenditure for this group relative to others. The figure for imputed rent for the under 31 age group indicates a low level of home ownership among this group.

Food takes a larger share of the total for the under 31 and over 65 group, but not unexpectedly, a considerably smaller share is absorbed

by educational costs. The share of the total attributable to clothing and footwear falls consistently through each age group.

IV) Sources of Income

Table 10 provides income information on the distribution of the sample according to income groups, excluding the 29 households who did not report income.

Average household income for all household members is given, as well as average weekly income per worker, which is derived for each income group by taking average household income and dividing by the reported average number of persons working in each group. The table provides the source of income for each group and the relative share provided by the different sources. Table 2, giving household characteristics, indicated that for each income group the household income rose as the number of workers per household rose, with the exception of the uppermost group, where a drop in number of workers occurred. In the lowest income group (under \$200 per week) containing the greatest proportion of retired persons, because on average less than one household member worked, the average income per worker has not been calculated. One of the key numbers in this table is the average income per person working derived from wages and salaries, which at \$307 per week is consistent with much that is already known about employment income through the National Accounts estimates.

Major differences in source of household income are apparent in the lowest income group, under \$200 per week, where the proportion of

average household income attributable to imputed rent and pensions is particularly high. The two are related, to the extent that a high proportion of heads of household have, by the time they reach pensionable age, also become owner occupiers of their dwelling place, thus income from both these sources looms larger than in other income groups and wages and salaries relatively smaller.

Not surprisingly, investment income including interest, dividends and net rents assume considerably greater relative importance in the topmost income group, \$1,500 per week and over.

For all income groups combined, the proportion of income attributable to wages and salaries, 72 percent, corresponds very closely to comparable figures in the United Kingdom and is not greatly at variance with that for the United States where the measures are on a slightly different conceptual basis.

It should be noted that the removal of imputed rental equivalents for owner-occupiers would not move any of the households into a lower income grouping.

V) Ownership of Consumer Durables

Table 11 shows the percentage of households owning at least one of a selected list of consumer durables; these are generally relatively expensive items which are expected to have a life expectancy well in excess of one year.

It should be noted that for some items such as stoves, where close to 100 percent ownership might be expected, there are a

number of renters who have the use of such items but who do not own them. In the case of TV's, with 77.6 percent owning colour sets and 54.4 percent owning black and white sets it is not possible to determine definitively if all homes own TV sets. The answer is probably that most homes are serviced with either a colour or black and white set and that a fairly large proportion of homes are multiple owners.

Although car ownership by 69.5 percent of households may seem low on first impression, the figure is consistent with the total number of registered private motor vehicles and the total number of occupied dwellings. The number of cycles owned, reported by only 52.1 percent of households, seems low and can only be explained by the fact that many households are multiple owners.

Ownership of boats over ten feet, microwave ovens and dishwashers is still the exception, ranging from 12-15 percent of households. However, both air conditioners and video equipment are now owned by just over one quarter of households.

The percentage of households owning consumer durables tends to increase as income levels rise, so that in the uppermost income group, over one half own boats over 10 feet in length, 95 percent own cars, 57 percent own dishwashers, 62 percent own microwave ovens and 90 percent own colour T.V.'s. These figures are, not surprisingly, considerably above the average rate of ownership for all households.

Appendices

TABLE 1

HOUSEHOLD CHARACTERISTICS -
1980 CENSUS AND 1982 SURVEY COMPARISON

Item	Household Expenditure Survey 1982	Population Census 1980
Total Households	414	18,449
Average number of persons per household	2.74	2.93
Average number of adults	2.00	2.21
Average number of children	0.74	0.72
Average number of persons working per household	1.58	1.67
	percent of all households	
Single person households	19	25
Single parent households	} 67	} 58
Nuclear household		
Related, non-related and mixed households	14	17
Male heads of household	75	71
Female heads of household	25	29
Black heads of household	51	56
White & other heads of household	49	44
Renters	54	60
Owner Occupiers	46	40
Geographic Distribution		
St. George's	6	8
Hamilton	6	6
Smith's	11	9
Devonshire	9	12
Pembroke	24	23
Paget	13	9
Warwick	14	13
Southampton	7	8
Sandys	10	11

TABLE 2

SUMMARY OF HOUSEHOLD CHARACTERISTICS BY
INCOME GROUPS

	All Income Groups	Weekly Household Income					
		Under \$200	\$200-\$499	\$500-\$799	\$800-\$1,099	\$1,100-\$1,499	\$1,500 and over
Total households in sample	414	32	133	125	67	36	21
Average number of persons per household	2.74	1.59	2.26	3.05	3.37	3.31	2.71
" " adults per household	2.00	1.38	1.67	2.18	2.39	2.45	1.90
" " children per household	0.74	0.21	0.59	0.87	0.98	0.86	0.81
" " workers per household	1.58	0.50	1.17	1.82	2.10	2.17	1.67
" " retirees per household	0.15	0.56	0.20	0.08	0.06	0.03	0.10
" " other persons per household	1.01	0.53	0.86	1.15	1.21	1.11	0.94
Average age of head of household	47	65	47	44	43	46	49
Number of single person households	78	18	40	15	2	1	2
" " single parent households	34	3	24	3	3	-	1
" " nuclear households	244	9	55	82	51	30	17
" " related, non-related households	58	2	14	25	11	5	1
Number of male head of households	310	14	77	11	64	34	20
" " female head of households	104	18	56	24	3	2	1
Number of renters	222	15	93	72	30	7	5
" " owner occupants	192	17	40	53	37	29	16
Head of household completed primary school	97	16	40	27	8	5	1
" " secondary school	168	12	53	60	24	13	6
" " university/vocational	141	3	37	37	33	17	14
" " other/not stated	8	1	3	1	2	1	-
Number of black head of household	211	21	81	66	27	12	4
" " white/other head of household	203	11	52	59	40	24	17
Bermuda born head of household	251	26	86	80	33	19	7
Foreign born head of household	163	6	47	45	34	17	14

TABLE 4

HOUSEHOLD EXPENDITURE BY MAJOR DIVISIONS AND GROUPS
BERMUDA 1982

Number of households in sample	Weekly Household Income						
	All Income Groups	Under \$200	\$200-\$499	\$500-\$799	\$800-\$1,099	\$1,100-\$1,499	\$1,500 and over
Average dollar expenditure per week:-							
Food & non-alcoholic beverages	92.06	40.88	69.12	93.01	113.49	119.81	164.37
Cereals & cereal products	9.61	8.05	8.33	9.23	10.53	11.29	14.78
Meat & meat products	16.98	7.10	13.49	17.61	19.14	23.48	24.64
Fish, frozen, dried or canned	2.72	1.07	3.44	2.47	2.63	3.01	2.38
Dairy products	11.85	5.94	9.41	11.96	14.67	14.39	17.72
Fats & oils	2.31	1.57	2.29	2.40	2.22	2.42	2.94
Fruit	7.99	4.09	6.07	7.90	10.16	7.67	16.64
Vegetables	8.11	3.62	5.78	8.67	9.09	10.66	14.49
Sugar & sugar confectionery	3.03	2.27	2.57	3.31	3.38	2.75	3.98
Savoury snacks	0.72	0.02	0.56	0.79	0.85	0.75	1.47
Beverages, tea, coffee, etc.	1.83	0.59	1.74	1.61	2.07	2.62	3.14
Other foods	5.16	1.87	3.97	5.73	5.63	5.82	8.58
Soft drinks	4.17	1.61	2.80	5.12	4.57	4.11	7.12
Meals and snacks bought out ✓	17.58	3.08	8.67	16.21	28.55	30.84	46.49
Alcoholic drink & tobacco	12.95	1.63	9.32	11.74	21.06	17.02	27.61
Alcoholic drinks	9.00	0.13	6.02	7.78	15.73	12.21	21.55
Tobacco and smokers' accessories	3.95	1.50	3.30	3.96	5.33	4.81	6.06
Clothing & footwear	31.29	4.61	16.87	29.65	44.59	57.65	86.64
Men's clothing	7.27	0.48	3.33	6.00	13.50	12.51	21.46
Boys' clothing	1.38	-	0.80	1.79	2.05	2.33	1.02
Women's clothing	9.56	2.27	5.48	8.99	11.86	17.04	29.63
Girls' clothing	1.49	0.90	0.66	1.75	1.59	3.21	3.99
Infants' clothing	0.50	-	0.58	0.52	0.91	0.05	0.04
Personal furnishing & accessories	3.47	0.38	1.33	3.16	3.79	9.10	13.28
Clothing material, dry cleaning, repair	2.26	0.18	1.34	2.26	3.31	4.47	4.47
Footwear	5.36	1.21	3.35	5.18	7.58	8.94	12.75
Housing	121.39	68.69	77.06	96.88	154.90	198.91	388.50
Rents - average all types of tenure	107.44	60.50	70.74	89.67	138.42	174.02	304.34
(Rent furnished)	100.73	46.33	67.00	91.44	179.47	-	-
(Rent unfurnished)	74.02	41.92	57.06	74.53	99.30	146.00	-

TABLE 4

Weekly Household Income

	All Income Groups	Under \$200	\$200-\$499	\$500-\$799	\$800-\$1,099	\$1,100-\$1,499	\$1,500 and over
(Rent free) (Owner occupier-rental equivalent)	148.13	-	79.00	97.25	142.67	-	359.67
Repair & maintenance	129.87	76.12	90.58	104.17	129.78	175.31	288.19
	13.95	8.19	6.32	7.21	16.48	24.89	84.16
Fuel & power	23.34	12.50	18.59	22.49	26.26	34.42	46.56
Household goods & services	81.40	24.77	50.79	69.56	97.62	137.55	284.51
Furniture	9.11	0.44	7.18	5.80	12.89	13.82	34.37
Furnishings, floor coverings, household textiles	6.87	1.08	2.42	5.18	9.66	14.63	31.49
Household equipment, tableware, kitchenware	1.85	0.37	0.98	1.56	2.10	3.10	8.41
Household appliances	-13.27	2.41	7.37	12.29	20.98	24.78	28.94
of which: home entertainment equipment							
TV, video, sound equipment	(6.49)	(1.42)	(3.94)	(5.81)	(9.42)	(15.12)	(10.37)
Household services	35.34	12.69	21.26	29.67	34.29	60.37	153.28
of which: telephone	(11.93)	(5.11)	(10.36)	(10.65)	(12.76)	(14.61)	(32.56)
Household, cleaning, paper, plastic & garden supplies	14.96	7.78	11.58	15.06	17.70	20.85	28.02
Transportation	50.24	6.08	31.99	61.34	66.42	70.67	81.59
Car-purchase	16.62	-	6.26	24.34	21.20	20.08	41.20
Car-operational expenses	23.43	3.08	17.29	25.82	32.09	36.71	29.38
Cycle-purchase	3.12	0.58	1.96	3.38	5.10	4.56	4.03
Cycle-operational purchase	3.29	1.39	2.11	3.51	4.70	5.69	4.11
Public transport services	3.78	1.03	4.37	4.29	3.33	3.63	2.87
Education	16.56	0.12	4.75	8.50	14.76	66.21	85.07
Local	5.85	0.12	2.21	4.73	9.43	16.07	15.49
Abroad	10.71	-	2.54	3.77	5.33	50.14	69.58
Foreign Travel, including air fares	37.25	9.33	16.49	35.61	49.50	68.57	133.14
Medical, health and personal care	33.94	19.78	30.99	32.59	39.69	43.49	47.10
Health insurance	11.36	8.61	8.72	12.76	13.85	12.85	13.33
Medical & dental services	9.80	4.75	12.84	7.46	9.25	11.20	11.52
Medical supplies	2.96	3.36	2.29	2.91	3.39	3.91	3.79
Personal care products	5.00	1.62	4.16	4.55	6.65	7.24	9.05
Personal care services	4.82	1.44	2.98	4.91	6.55	8.29	9.41

TABLE 4

	Weekly Household Income						
	All Income Groups	Under \$200	\$200-\$499	\$500-\$799	\$800-\$1,099	\$1,100-\$1,499	\$1,500 and over
Entertainment & recreation							
Admission fees & club subscriptions	31.48	3.53	13.41	24.34	45.92	58.09	139.11
Recreational equipment & pets	5.73	0.53	2.88	4.62	8.36	12.96	17.79
Reading material	21.02	1.74	7.57	15.88	31.02	35.38	109.80
Miscellaneous expenditures	4.73	1.26	2.96	3.84	6.54	9.75	11.52
Total consumption	5.08	0.22	2.68	4.92	8.48	8.50	11.79
Total consumption	536.98	192.14	342.06	490.63	682.69	880.89	1,495.99
Gifts, contributions, life insurance & pension funds	47.90	8.20	25.54	42.49	67.42	71.56	182.45
TOTAL EXPENDITURE	584.88	200.34	367.60	533.12	750.11	952.45	1,678.44

TABLE 5

SUMMARY OF HOUSEHOLD EXPENDITURE
ALL INCOME GROUPS
1974/75 AND 1982

	1974/75		1982		Percent Increase 1974/75 to 1982	% Price Increase 1974/75 to 1982
	\$	%	\$	%		
Average dollar expenditure per week:-						
✓ Food & non-alcoholic beverages	51.54	23.9	92.06	17.1	78.6	70.8
Alcoholic drink & tobacco	5.77	2.7	12.95	2.4	124.4	79.3
Clothing & footwear	13.24	6.1	31.29	5.8	136.3	130.1
Housing	44.35	20.6	121.39	22.6	173.7	n.a.
Fuel & power	9.64	4.5	23.34	4.3	142.1	127.8
Household goods & services	28.11	13.1	81.40	15.2	189.6	n.a.
Transportation	16.54	7.7	50.24	9.4	203.7	n.a.
Education	5.40	2.5	16.56	3.1	206.7	n.a.
Foreign travel ✓	12.72	5.9	37.25	6.9	192.8	n.a.
Medical, health & personal care	12.92	6.0	33.94	6.3	162.7	n.a.
Entertainment, ✓ recreation & miscellaneous ✓	15.12	7.0	36.56	6.9	141.8	n.a.
Total consumption	215.35	100.0	536.98	100.0	149.2	75.6

TABLE 6

PERCENT OF HOUSEHOLDS REPORTING EXPENDITURE 1982

Selected Items	% of Households Reporting Expenditure during year
Beer	60
Wines	60
Spirits	56
Cigarettes	37
Painting inside/outside house	57
Cooking stove electric/gas	9
Refrigerator without freezer	3
Refrigerator with freezer	4
Microwave oven	3
Fully & semi automatic clothes washer	6
Clothes dryer	3
TV - colour	14
black/white	5
Video	14
Stereo system	6
Telephone service	99
Day nursery/child care outside the home	14
Automobile - new	11
Cycle - new	11
Primary/secondary school in Bermuda	13
Primary/secondary school abroad	3
Post secondary education abroad	6
Foreign trips	70
Health insurance	96
Local newspapers	89
Contributions to religious organisations	68

TABLE 7

SUMMARY OF HOUSEHOLD EXPENDITURE BY RACE AND SEX
OF HEAD OF HOUSEHOLD

	Black		White ⁽¹⁾		All Groups
	Male	Female	Male	Female	
Number of households in sample - all income groups	152	59	153	42	414
Total average household income per week	627.81	403.03	894.02	415.07	672.40
Average dollar expenditure per week					
Food & non-alcoholic beverages	91.50	79.28	105.21	62.50	92.06
Alcoholic drink & tobacco	8.86	4.34	20.81	8.68	12.95
Clothing & footwear	27.86	20.70	41.99	19.70	31.29
Housing	98.25	73.49	169.26	98.90	121.39
Fuel & power	22.17	18.81	28.42	15.99	23.34
Household goods & services	65.23	44.71	118.05	61.86	81.40
Transportation	52.13	39.20	60.39	27.95	50.24
Education	13.30	6.08	27.48	7.02	16.56
Foreign travel	29.90	15.63	57.48	19.81	37.25
Medical, health & personal care	39.40	24.02	35.51	23.26	33.94
Entertainment & recreation	26.15	11.19	49.00	17.43	31.48
Miscellaneous expenditure	5.84	2.99	6.00	2.70	5.08
Total consumption	480.59	340.44	719.60	365.80	536.98
Gifts, contributions, life insurance & pension funds	44.43	27.06	61.20	30.98	47.90
Total expenditure	525.02	367.50	780.80	396.78	584.88
Percentage distribution of consumption					
Food & non-alcoholic beverages	19.0	23.3	14.6	17.1	17.1
Alcoholic drink & tobacco	1.8	1.3	2.9	2.4	2.4
Clothing & footwear	5.8	6.1	5.8	5.4	5.8
Housing	20.4	21.6	23.5	27.0	22.6
Fuel & power	4.6	5.5	3.9	4.4	4.3
Household goods & services	13.6	13.1	16.4	16.9	15.2
Transportation	10.8	11.5	8.4	7.6	9.4
Education	2.8	1.8	3.8	1.9	3.1
Foreign travel	6.2	4.6	8.0	5.4	6.9
Medical, health & personal care	8.2	7.1	4.9	6.4	6.3
Entertainment & recreation	5.4	3.3	6.8	4.8	5.9
Miscellaneous expenditure	1.2	0.9	0.8	0.7	0.9
Total consumption	100.0	100.0	100.0	100.0	100.0

(1) Excludes those classified as 'other'

TABLE 8

CHARACTERISTICS OF HEAD OF HOUSEHOLD
BY RACE AND SEX ⁽¹⁾

	Black		White	
	Male	Female	Male	Female
Total households in sample	152	59	153	42
Average number of persons per household	2.90	2.78	2.90	1.55
" " " adults per household	2.19	1.77	2.09	1.33
" " " children per household	0.71	1.01	0.81	0.22
" " " workers per household	1.78	1.45	1.61	0.98
" " " retirees per household	0.20	0.07	0.13	0.24
" " " other persons per household	0.92	1.26	1.16	0.33
Average age of head of household	48	48	44	51
Number of single person households	18	16	16	27
" " single parent households	4	24	-	5
" " nuclear households	108	4	124	4
" " related, non-related households	22	15	13	6
Number of male head of households	152	-	153	-
" " female head of households	-	59	-	42
Number of renters	64	35	88	26
" " owner occupants	88	24	65	16
Head of household completed primary school	54	21	16	4
" " " secondary school	63	23	61	17
" " " university/vocational	31	15	73	20
" " " other/not stated	4	-	3	1
Number of black head of household	152	59	-	-
" " white/other head of households	-	-	153	42
Bermuda born head of household	128	54	47	20
Foreign born head of household	24	5	106	22

(1) Table does not include 8 head of households classified to 'other' ethnic origin.

TABLE 9

DISTRIBUTION OF WEEKLY EXPENDITURE
BY AGE OF HEAD OF HOUSEHOLD ⁽¹⁾

	All Age Groups	Under 31	31-45	46-64	Over 65
Size of Sample	414	60	157	130	67
	Percentage Distribution				
Food & non-alcoholic beverages	17.1	19.1	16.5	16.4	20.4
Alcoholic drink & tobacco	2.4	3.2	2.2	2.7	1.2
Clothing & footwear	5.8	7.5	6.5	5.5	2.3
Housing	22.6	20.1	21.4	22.4	30.8
Fuel & power	4.3	4.0	4.1	4.3	5.7
Household goods & services	15.2	16.2	16.1	13.9	14.4
Transport	9.4	9.1	9.9	9.3	7.6
Education	3.1	0.6	3.3	4.5	0.4
Foreign travel	6.9	6.1	7.4	7.3	5.0
Medical, health & personal care	6.3	5.8	5.1	7.4	7.5
Entertainment & recreation	5.9	7.7	6.5	5.4	3.4
Miscellaneous	0.9	0.7	1.0	0.8	1.3
Total consumption	100.0	100.0	100.0	100.0	100.0
Total Expenditure ⁽²⁾ — weekly average	\$585	\$477	\$629	\$686	\$396
Average Weekly Household income	\$672	\$577	\$714	\$813	\$399
Average imputed rental equivalent included in both income and expenditure for owner occupants ⁽³⁾	\$ 65	\$ 6	\$ 57	\$ 91	\$ 87

(1) Includes only those reporting income

(2) Includes gifts, contributions, life insurance and pension funds

(3) Figure represents imputed rent for owner occupiers averaged over all households in group.

TABLE 10

AVERAGE AGGREGATE HOUSEHOLD INCOME BY SOURCE OF INCOME AND WEEKLY HOUSEHOLD INCOME GROUP

	Aggregate Weekly Household Income						
	All Income Groups	Under \$200	\$200-\$499	\$500-\$799	\$800-\$1,099	\$1,100-\$1,499	\$1,500 and over
Number of households in sample	414	32	133	125	67	36	21
Percentage distribution	100.0	7.7	32.1	30.2	16.2	8.7	5.1
Average number of persons per household	2.74	1.59	2.26	3.05	3.37	3.31	2.71
Average number of persons working per household	1.58	0.50	1.17	1.82	2.10	2.17	1.67
Average aggregate household income for all household members received from:							
Wages & Salaries	485	51	257	480	709	901	1,179
Self employment	45	9	12	50	82	73	117
Pensions, government & private	16	27	22	10	8	6	47
Investments including net rents	54	15	17	39	47	108	370
Other regular allowance from outside the household	7	4	10	7	3	12	6
Imputed income from owner occupancy	65	41	30	46	76	141	264
Total all sources	672	147	348	632	925	1,241	1,983
Average aggregate household income per person working from:							
Wages & Salaries	307	(1)	220	264	338	415	706
Self employment	28	(1)	10	27	39	34	70
Pension, government & private	10	(1)	19	6	4	3	28
Investment, including net rents	34	(1)	15	21	22	50	221
Other regular allowances from outside the household	4	(1)	9	4	1	6	4
Imputed income from owner occupancy	41	(1)	26	25	36	65	158
Total all sources	424	(1)	299	347	440	573	1,187

TABLE 10

% CONTRIBUTION OF EACH SOURCE OF INCOME TO AGGREGATE HOUSEHOLD INCOME

Source of Income	Aggregate Weekly Household Income						
	All Income Groups	Under \$200	\$200-\$499	\$500-\$799	\$800-\$1,099	\$1,100-\$1,499	\$1,500 and over
Wages & Salaries	72.2	34.7	73.8	75.9	76.6	72.6	59.4
Self employment	6.7	6.1	3.4	7.9	8.9	5.9	5.9
Pensions, government & private	2.4	18.4	6.3	1.6	0.9	0.5	2.4
Investments including net rents	8.0	10.2	4.9	6.2	5.1	8.7	18.7
Other regular allowances from outside the household	1.0	2.7	2.9	1.1	0.3	1.0	0.3
Imputed income from owner occupancy	9.7	27.9	8.6	7.3	8.2	11.4	13.3
Total all sources	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(1) Less than one member of household working on average and calculation of this column not meaningful.

TABLE 11

CONSUMER DURABLE OWNERSHIP

Item	Percentage of Households
Air conditioner(s)	28.0
Boat(s) over 10 feet	15.1
Car	69.5
Clothes dryer	38.8
Clothes washer	77.9
Cycle(s) motor or auxilliary	52.1
Dishwasher	14.1
Freezer	30.9
Microwave oven	12.0
Refrigerator	87.3
Sewing machine	51.7
Stereo System	69.5
Stove-electric	35.0
Stove-gas	51.9
TV-colour	77.6
TV-black/white	54.4
Video equipment	25.1
