1. Introduction

The 2002 Household Income and Expenditure Survey (HIES) is the second such survey conducted by the Department of Statistics DOS) since the last one in 1997. The 2002 HIES collects information on Income and Expenditure of each sampled household in order to provide information on the economic characteristics of all households in Samoa. The main objectives of this survey are.

i. To adjust the weights of the Consumer Price Index (CPI) using the household expenditure pattern of the households and

ii. To provide data determine the extend of hardship and vulnerability of households in Samoa

This undertaking was funded by the Government of Samoa and the Asian Development Bank (ADB)

It needs to be noted that the volume of data collected makes the analysis complicated and difficult. The skills required to undertake such analysis and interpretation of data involve strong conceptual, analytical, statistical and computing skills.

With this in mind the DOS was fortunate to have access into the services of Mr. Gene Lorica, a Data Processing Expert on IMPS from the Phillipines National Statistics Office whom we also employed for the 1999 Agricultural Census. The DOS provided counterpart staff to Mr Lorica during his six week assignment and throughout the project which provides a vehicle for the transfer on much needed skills.

The Data Processing Consultant's term of reference was to "design and develop the data processing requirements for the 2002 Household Income and Expenditure Survey (HIES conducted in August – October, 2002.) The duration of the consultancy was for six week divided into two missions. The first mission was undertaken from October 22 – November 5, 2002, while the 2nd mission was from February 14 – March 14, 2003.

Specifically the Data Processing Consultant was :

a) To develop a data entry system to encode the data in the questionnaires efficiently and completely.
b) To develop a data validation program to ensure the consistencies and correctness of the data.
c) To assist the local staff in the generation of the required statistical tables; and
d) To provide training to the national counter

II Survey Methodology

The sampling technique used for the 2002 HIES is a stratified single stage cluster design where the strata are the four regions namely: Apia Urban Area (AUA), Northwest Upolu (NWU), Rest of Upolu (ROU), and Savaii while the clusters are the villages. To achieve 10% sample households for the 1st two regions, every 10th villages were selected and for 5% sample households in the last two regions, every 20th villages were selected. All households within the selected villages were enumerated. Due to variability in the size of villages, the resulting proportions of sampled households to the total households in the frame does not come to the required sample size. The resulting proportions are;

AUA – 8.3 %
NWU – 7.2%
ROU – 5.3%
Savaii – 4.4%

III Field Operation

Sampling methodology were discussed earlier in which twenty three villages throughout the country were selected. From experiences gained in the 1997 HIES, field supervision was one area that was identified as requiring improvements.

As a result a lot of efforts was put into improving the fieldwork supervision apart from operating on a reduced sample.

The fieldwork was organized in two phases. From 5 to 30 August 2002, fourteen of the twenty three villages were enumerated. Depending on the number of households in the selected villages, two to nine enumerators were posted to each villages for the duration of 4 weeks.

The first week was to collect data using the Household Form and to introduce the Two-week Diary that every household was required to complete starting Sunday the following week.

During the next two weeks the enumerators were to visit each household to follow up the completion on the Diary.

This proves very effective not only in helping the household in completing the Diary correctly but also to allow for other members on the household, particularly those at work during the day, to record their expenditure/income that has not been reported in the Diary for that day.

The last week was necessary for collection of all survey documents, check for completeness before bringing them to headquarters.

This arrangement was made possible by the continuous support of the Pulenuu (Village Mayors) who kindly assist in the organization of their respective villages for the fieldwork,

act as mediators in case of refusal and also provide accommodation for the field staff.

This means that data collected were of high quality and do not have the problems inherent to the dairy approach of collecting these data. Although there are some households that do not have complete forms, the response rate or the number of households who has complete forms is above 95%. Only those households with complete forms were included in the post data entry processing, that is, data cleaning, imputations, and generation of statistical tables.

The effect of non-responding households was taken cared of by adjusting the Weight (Raising Factor) during the final summarization of the data.

IV Accuracy of Estimates

Accuracy and reliability of estimates in a survey such as HIES are measured by computing the sampling error, specifically standard errors (SE) and coefficient of variations (CVs), for the variable of interest. Although it is known that survey estimates are subject to both non-sampling and sampling errors, only the sampling errors can be calculated. The first type of errors is extremely difficult and expensive to measure. In practice, this type of errors is minimized by means of quality control and operational control measures in all phases of the survey.

When choosing and designing the sampling technique that will be employed, sampling errors are known or fixed for main variables, before selection of sample is done. The number of samples is determined based on this accepted degree of accuracy. Unfortunately, this was not the case for HIES, instead, sample households were selected without adjusting the number of sample and the sampling technique to the target accuracy of the estimates for main variables. This is the main reason for the considerably higher coefficient of variations or relative standard error (RSE). The tool used for the computation of the standard errors is the CenVar of IMPS. This software uses the Ultimate Cluster Variance Approach (See CenVar Manual for the detailed documentation of the algorithm Used).

The resulting coefficient of variations (relative standard error) at the national level for the number of households, number of persons, weekly household income and weekly household expenditures are in the range 5% - 8%. These may be relatively good estimates for total. But when the CVs for

totals are computed by region, all regions except Northwest Upolu have CVs greater than 10% but less than20%. Northwest Upolu has CVs ranging from 2% - 9%.

For means such as average household size, average household weekly income and expenditure, the resulting CVs are less than 5% for the whole Samoa. When the CVs are calculated for each region, all regions except Savaii have CVs less than 10%.

In practice, estimates with coefficient of variations (CVs) that are less than 20% are considered as statistically "accurate." On the other hand, those estimates with CVs greater than 20% are considered as indicative and should not be used at face value.

Standard errors of key variables are attached as **Appendix 2.**

V Analysis of Questionnaire Design and its Contents

The 2002 HIES is an undertaking that aims to collect household income and expenditure of each sample household in order to provide information on the economic characteristics of all households in Samoa. The main objectives of this survey are:

a) To adjust the weights of the consumer Price Index (CPI) based on the Household expenditure pattern of the households, and

a) To provide data to determine the extent of hardship (poverty) and Vulnerability of households in Samoa.

To collect these data, the survey used three types of form, namely the Household Form, the Individual Form, and the Diary Form.

Household Form (booklet)contains information on demographic characteristics of the household, unpaid household activities, and expenditure on housing utilities, education, health and overseas trips, and construction or major repair of dwelling unit. Also included are data on ownership, acquisition and receipt as gift of major consumer items such as motor vehicle, appliances and some household tools.

Individual Form (loose sheet for each member) is the survey instrument used to collect data on income and other receipts of each individual 15 years old and over. This is also used to collect data on other expenditures or disbursements of

each member mentioned above. As in the Household Form, this was administered before the Diary Form is given.

Diary Form is a booklet where respondents are asked to write down all their daily purchases of consumer items, value of consumption of home grown/produced items, value of home grown/produced items sold, given away as gifts and items received as a gifts. Cash and purchased goods given away or received as gifts were also asked. If there are special events such as weddings, funerals, birthday parties, and others, the respondents were also required to report the total estimated expenditure. Each household was given two diary forms (booklet) to list down the data items mentioned above for two weeks. Hence, four (4) sets of forms were process for each household.

Household Form

The form contains the following sections:

1. Demographic / personal detail
2. Hours spent o specific activities
3. Ownership and acquisition of major consumer items
4. Expenditure on household utilities and actual rent for dwelling
5. Expenditure on Education, Health and Overseas trips
6. Expenditure on house construction or major repairs ($2000 or more)

For section 1.1 (Personal Details), the most commonly asked characteristics of each member were gathered. These include relationship to household head, age, sex, marital status and highest level of educations. In addition, the main daily activity (MDA) of each member 10 years old and over was also gathered. Entry in the main daily activity is used to check the reported number of hours in section 1.2 (Hours spent). Depending on the reported MDA, items in section 1.2 may or may not have entries (See Attachment B for the edit specifications).

The technique used in collecting the data on hours spent on household activities is straightforward.

Because of the simplicity of the design of the questionnaire, care must be taken whenever analysis of these data items is to be done. The following observations must be taken into considerations:

a) Hours spent on household activities of full time paid employee are no longer collected. This of course consequently excluded the hours spent by live-in paid domestic servants in performing domestic duties. Paid domestic servants are not considered as household member.

b) Hours spent on household activities of full-time students were not collected.

c) Hours spent on household farming and assistance in household Agriculture must not be cross – analyzed with Main Daily Activity As "correlates" since it was ambiguously cross checked.

d) An in-depth scrutiny of each activity reveals that not all activities listed in the questionnaire (and write-in other activities) could be considered as unpaid.

Activities that are indirectly paid are:

1. Activities associated with farming, fishing, and handcrafts since the outputs produced in these activities was either consumed, sold or given away as gifts which have already been valued in the dairy form.

2. Traditional therapy (if with income reported in individual form).

3. Selling newspaper

4. Collecting bottles since these bottles will be eventually sold.

5. Tending family business and stalls since the output of these activities will be valued as income derived from such entrepreneurial activities.

The activities that are considered as unpaid are:

1. Cooking
2. Washing
3. Looking after young children, sick and disabled persons, and the elderly
4. Traditional therapy (if no income is reported in individual form)
5. Gardening, lawn mowing, collecting rubbish
6. Sewing
7. Feeding livestock and poultry
8. Collecting coconuts (for own use)
9. Washing car
10. Village, Church and School activities
11. Doing work on other households for free
12. Ironing

For section 1.3, ownership and acquisition of major consumer items, whether paid or received as gift, for the last 12 months were collected. The questionnaire would allow up to three acquisition of the same major consumer item, which is fair enough since it is very seldom that households will

purchase more than three pieces of these items during the reference period.

Section 2, contains information about expenditure on household bills, education, health and overseas trips, and major repair and/or construction of a new house. The references periods used vary depending on the data item. For household bills, the amount and period covered of the last bill paid was gathered. Expenditure on education was asked for the last term. Unfortunately the meaning of "last term" differs depending on the level and type of schools, i.e., public or private. For kindergarten, primary and secondary schools, "last term" may mean 3 or 4 months, depending on whether the school is private or public, respectively. For tertiary schools, commercial schools and other schools expenditures are considered as for one semester, i.e., 6 months.

The period covered for health expenditure is for 3 months while expenditure for overseas trips and major repair / construction of a new house is asked for the last 12 months.

Individual Form

The form was administered to all household members, 15 years and over, It contains the following information:

7. Occupation of the member
8. Sources of personal income or receipts
9. Other personal expenditures

The result of the edit program showed that there are several household members who do not have their corresponding Individual Forms. Also, there are some members who reported their occupation but refused to give details on their income and expenditures. Those who do not have individual forms were tagged as "no report" (Occupation code = '999') and those who did not report the details of their income were marked as "no income reported."

Occupation is coded down to the lowest level, i.e., 3-digit classification code. Section 1.2 asked for the person's receipts for the past week, for the last 4 weeks and for the last 12 months prior to distribution of the diary forms. This does not necessarily mean that entries should sum-up to each corresponding longer reference period. That is, report for the "past week" multiplied by 4 is not necessarily equal to the reported receipt in the "last 4 weeks." Similarly, receipts reported in the "last 12 months" are not necessarily equal to the report in the "last 4 weeks" times 12.

If the person earned or had receipts during the past week only, the reported receipt is copied as receipt in the last 4 weeks and likewise in the last 12 months. This method of collecting data on receipts may look questionable or problematic to others, but a closer scrutiny reveals that it

has some advantages. Following the System of National Accounts (SNA) definition of income that receipts should be on a regular basis (UN Handbook of Household Survey, series F, no.31), the above method could be used to identify the regular income from the irregular. For this report, irregular receipts were not excluded in the computation of average weekly receipt. In such cases the report in the last 12 months was divided by 52 weeks to get the weekly average. This was done since getting the latest report from past week or last 4 weeks will overestimate the receipts that were not regularly received.

Possible sources of receipts are listed in the form. For other sources, three rows were allocated. For the sale of other homegrown / produced items, there are also only three allocated rows but if there are more than three crops / items, enumerators were asked to write it somewhere near the three entries. It must be emphasized that the word homegrown is a misnomer since these may also mean net receipts from farm or handicraft making operations.

The concept of farming in Samoa is different since there is no clear distinction of farming as main income source and farming for own use. Note also that not all entries in this section were included as household income. Following the SNA recommendation, these entries were summarized into three categories, namely, primary income, other sources of income and other receipts. Please see the tabulation section for the detailed components of these income types.

Note that household and individual forms were administered prior to the diary forms.

Diary Form

The form consists of several pages where two pages are allotted for each day of the week, starting Monday to Sunday. The 1st page of the two pages is allotted for cash and on credit expenditure while the second page is for home grown / produced items whether used or consumed, sold, given away as gift and those received as gift. To account those items that are actually bought in cash or on credit but given away as gift and received as gift, each one is allotted one page per booklet. Also, if there are special events that happened during the week, there is an allotted page to list down the estimated total amount spent. There was some confusion on the items bought but given away as gifts since these were also included in the daily expenditure as actual expenditure. This will result to double counting if the items from the daily expenditure and the corresponding entry in the given away as gift will be included in the total expenditure. This happened since the concept of **household total consumption expenditure** was not considered during the enumeration. To solve this problem, an imputation program was developed that removes the corresponding items report as given away as gift in the daily expenditure. It should have been done manually but due to time constraints, it was decided to use an imputation program.

The imputation program has limitations since only those items that were found in the day that the items were reported given away were deleted. This flaw is assumed to have minimal effect on the total expenditure since visual inspection of the questionnaires reveals that the items were actually

reported as given on the same day as they were bought (or reported).

The diary form is the survey instrument used to collect information on the household expenditure pattern that will be used for the derivation of the CPI weights. The data reported in this form was also used to determine the extent of hardship and vulnerability to poverty of households in the country.

There are two approaches in collecting the expenditures of households as prescribed by the SNA. One is the "Acquisition Approach" where the total value of the items is considered regardless of whether these were consumed or not. The other approach is the "Consumption Approach" where only the value of items consumed is reported. In the case of the HIES, the "Acquisition Approach" was used for consumer items (i.e., items bought). The same approach is used for items that were received as gifts (i.e., the estimated total value of the item whether consumed or not). In addition, consumption of homegrown / own produced items are included in the consumption of the total expenditures.

This means that the total expenditure for each item should not be taken as equivalent to actual consumption of goods. Although this does not totally deviate from the recommended technique in collecting data about final consumption expenditure, future surveys of this nature must consider applying the concept of consumption expenditure when designing the questionnaire and preparing the enumerator's manual.

For The derivation of CPI weights, only the goods purchased in cash and /or on credit should be used because these entail the actual expenditure pattern of the households. For the 2nd

objective of estimating the poverty incidence using the expenditure approach, the total consumption expenditure, i.e., goods and services actually bought in cash and on credit, plus the value of homegrown or own produced consumed, plus the value of goods and services received as gifts should be used. This may underestimate the food poverty incidence since the total expenditure and not the actual consumption will be compared to the poverty threshold.

In general, the design of the questionnaire enables the collection of all the data needed to achieve the 1st main objective. However, for the 2nd objective, depending on the poverty estimation procedure to be used, the design has some limitations.

The concept of Income and Expenditure as defined by the SNA may not be fully covered by the survey since some data items were not included. Examples are the imputed rental value of own occupied dwelling units and the housing utilities paid for by the village or church. Although these may be very difficult to collect at the household level, some efforts must be exerted to get data from other sources (intelligent and well-researched "guesstimates" may be applied). For the measurement of the household welfare characteristics, some data items such as toilet facilities, availability of safe drinking water, etc. were already collected in the last census of populations and hence were not included in this survey.

Reconciliation of Reports from Household, Individual and Diary Forms

As was mentioned above, the household and individual forms were administered prior to the distribution of the diary forms. Some expenditure and income items collected in household or individual form were also gathered in the diary form. At first glance this should not be a problem but an in-depth analysis of the data reveals that there is a problem in the reference period used.

It should be noted that both the household and individual forms used various reference period in gathering income and expenditure data, whereas, expenses reported in the diary form correspond to a two week period after administering the household and the individual forms.

Analysis of the survey results requires for a computation of the average weekly income and expenditure of the household. Given the fact that the reference period for the household and individual forms do not overlap with the reference period in the diary form, the computation of the average weekly income and expenditure becomes a problem.

This unsynchronized expenditure could have been rectified if the household form was administered on the last day of the 2nd week of the enumeration, since the one reported I the household form would include those that are reported in the diary form.

Four possible ways were identified to treat these differences in the reference period to come up with accurate data on average weekly income and expenditure data. These are:

1) Get the report in the household form and drop the corresponding items sold in the diary form;

   This method was used in the case of household bills. Household bills from the diary may not reflect the expenditure pattern of the household for these items since it is very unlikely that all households will pay the bills within two weeks. The one in the household form is a better estimate. If there were entries in both the diary and household forms for these data items, the report in the diary was dropped and the one in the household form was used. This was done since the report in the household form has a definite reference period stated while there is none in the diary.

2) Compute for the average weekly report in the household or individual form and the average weekly report in the diary form. Then take the average of these two averages.

   This method will not give an accurate data on the weekly expenditure of the household since the data in the diary form will have a higher weight than the ones collected in either household or individual form where the period covered is longer. This method was not used.

3) Drop the report in the household form and get the report in the diary form.

   This method was used in cases where there is no report in the household form for household bills but has a corresponding report in the diary form. The value in

the diary form was used with the assumption that the amount paid corresponds to a monthly bill.

4) Adjust the reference period such that reports in household or individual forms will be "augmented" by the corresponding report in the diary form.

   As a remedy to the differences in the reference periods, the reports were reconciled by adding up the reference periods in collecting the items in the diary form and in the household or individual form. As an example, this was implemented by adding 2 weeks to the period stated in the household form or individual forms, i.e., making up a total of 54 weeks for the combined expenditure, say for motor vehicles, the corresponding entry in the diary was added to the reported value in the household form (last 12 months) and was divided by 54 weeks.

This technique was done for the following data items.

- Major consumer items (last 12 months)
- Education (last term)
- Health (last 3 months)
- Overseas trips (last 12 months)

Through these methods, we are able to make use of all the information gathered in all the forms. The program code needed to complete these techniques is quite complex but since CsPRO was used, this was done with little effort.

VI Data Processing

The questionnaires were firstly subjected to manual editing. The forms were bundled by enumeration area and by type of forms. Household forms and individual forms were bundled together while the diary forms for each week were bundled separately. This means that each enumeration area (block) has corresponding three bundles (folios).

The data entry system uses CsEntry fo CsPRO, a census and survey data processing system developed by the U.S. Bureau of Census. Forms were encoded by bundle. To facilitate the control and management of encoded bundles, a Visual Basic program known as HIPS was developed. This is an integrated processing system that facilitates the automatic recording of encoded and key verified bundles. Also included in this software is the completeness check or ID validation of encoded batches. The use of this system minimized, if not eliminated encoding error in the geographic area codes since the geographic area code of each batch is automatically supplied by the system.

To assure the completeness and correctness of data encoding, all questionnaires (100%) were key-verified. This process checks the entry in the encoded batches and flags an error message if the currently entered data is different from what was previously entered.

Data encoding and key-verification were completed in 5 weeks by 6 local staff.

The quantity and unit of measure were not encoded since the entries for unit of measure were reported textual form, i.e.,

“each” for pieces, “lbs” for pounds, etc. In addition even if these were encoded, it will be very difficult to process the data since the unit of measure considerably varies across various expenditure items. Hence, adding up the quantity becomes meaningless since the unit of measure is not standardized.

Data validation program was also developed for all forms. The list of error messages was printed and used to update the data files. Some errors are so numerous that manually updating the files will be very tedious and would take more resources. In such cases, a program was developed that fixes these flaws and inconsistencies electronically. Most of these errors are due to incomplete response while some are due to refusal.

After the data cleaning stage, a program was developed that attaches the computed weight (See estimation procedure for the details on this topic) and summarizes and computes for the total weekly income and expenditure of each household.

The resulting master file or database was used to generate the required statistical tables.

This same database was documented by describing each data item showing the editing, computation done, detailed description, limitations, and others procedures.

Standard errors for main data items were computed using CenVar.

VII Summarized Procedure

Since the data entry file format was designed for efficient data encoding of the questionnaires and not for tabulation, the data entry files were reformatted, merged and summarized into the final master-file. Since most of the tabulations used the weekly reference period, most of the summarized data items were converted into weekly values. **Annual estimates could be computed by multiplying the weekly values by 52.** The following procedure were done:

1) For Personal Details section, the corresponding entry in number of hours spent and reports in individual forms were attached for each person record (row) If the member has report on hours spent, the data item PQ1200 (hours spent indicator) is set to 1, otherwise it is set to 0. In the same manner, the data item PINC_IND (with income reported) is set to 1 or 0 depending on whether they have reported receipts or not. These personal receipts were grouped into three types of receipts, namely, Primary Income, Other Income, and Other receipts. The composition of these groups are as follows;

Annual Primary Income (APINC)

01) 01 Paid Employment (Gross pay)
02) 06 Drawings from business

03) 10 06 Traditional Therapy
04) 10 08 Other jobs
05) 10 09 All stalls (profit)
06) 10 10 Part time
07) 10 11 Overtime
08) 10 12 Allowance
09) 10 17 Board member
10) 10 21 Tips
11) 10 26 Sports / Games (Referee)
12) 10 28 Screen Printing

Annual Other Sources of Income (APOTHINC)

01 02 Money from sale of fish (profit)
02 03 Money from sale of coconut (profit)
03 04 Money from sale of handicrafts (profit)
04 05 Money from sale of other home grown/produced (profit) (excluding sale of livestock)
05) 07 01 Remittances from abroad (In kind)
06) 07 02 Remittances from abroad (In cash)
07) 08 01 Remittances from local sources (In kind)

08) 08 02 Remittances from local sources (In Cash
09) 09 Pensions
10) 10 02 Rental of cars
11) 10 05 Lease of Land
12) 10 13 Traditional Occasions
13) 10 14 From Village
14) 10 15 Asiaga / Asiga
15) 10 16 Money (cash) from friends / relatives
16) 10 18 From Church

17) 10 20 Sale of Empty bottles
18) 10 23 Others (dance, lotto,…….)
19) 10 25 Domestically Produced Assets (such as bricks)

20) 10 27 Sale of Empty bottles

Annual Other Receipts (APOTHRCPT)

01) 10 01 Gambling
02) 10 03 Sale of possessions or durable items (durable is verifications)
03 10 04 Loans/interest(cannot be separated, interest must sources and loans must be other receipt, this was treated as receipt since it is least likely that Samoans will pay interest on borrowed money form other person/household)
04) 10 07 Previous employment (for verification if this is a backpay)
05) 10 19 Compensation, NPF
06) 10 22 Clubs, Organization, Cooperatives
07) 10 24 Pool Table (winnings)

2) These personal receipts were also summarized into weekly values.

3) Reports in personal expenses were also grouped into three types, namely, Personal donations to church, Personal contributions to church, and other expenses.

4) For section 1.3 (Household Characteristics), entries were also reformatted and summarized. Items that are not owned and not acquired were discarded. Hence the items in the final data files

are those that the household owned or acquired. The reported values of the expenditure were also categorized into two depending on the acquisition mode, i.e.,bought from own funds (Q13305) or received as gift (Q13305). The values were "fused" into the diary form using the procedure previously discussed.

5) For section 2, the same record is kept in the file. Values were also "used" into the diary form using two approaches as previously discussed. For household bills, the period covered was not adjusted and corresponding entries in the diary form were dropped and the report in this section is used. Household bills are used regularly and must be paid regularly hence it is safe to assume that the report in this section is more stable than the one in the diary form.

Another reason is the period covered of the last bill paid is also included in the question while in the diary form, the period covered was not collected. If there is no report in this section but there is a report in the corresponding item in the diary then that report is used with the assumption that the period covered is for one month.

For Education, the technique used is quite complicated. To summarize the discussion on how it was done, the weekly expenditure were computed
depending on the terms used (public or private) and was combined with corresponding report in the diary by adjusting the reference period covered. Health and

overseas Trips were also combined with corresponding reports in the diary.

Expenditures on major repair or construction of a new house were not included in the total household expenditure but were instead included in other disbursement. Expenditures on building new house or major repair of houses are considered investments that may give an indication of savings on the part of the household.

6) For the data item ownership of the dwelling unit, the classification others (code 4) was changed to code 5 (Pay rent for house) if the household paid rent for house.

7) For the diary form the summarization is done to make all values for each item to be contained in one record. As an example, all values for taro" for the whole duration of the survey is summed up into one record depending on the nature of the disbursement or receipt. For each item the expenditure is summarized into Cash and credit (CASH), given away as gift (GIVEN), used (USED), received as gift (RECV), sold (SOLD), sold for credit (LEND), and value of bought on credit (CREDIT). Note that CREDIT is already included in CASH and LEND is also included in SOLD. The total consumption expenditure for each item (TOTAL) is also included. This total is the sum of CASH, USED, GIVEN, and RECVD. This was done to prepare the data file for the generation of CPI weights. Note that the data item

CASH should be used to generate the CPI weights since this corresponds to the actual cash expenditure of each household.

VII Highlights

- 82% of household have a male head of household.
- 28% of all person 10 year and over are either employed full time, part time or self employed.
- Donations contributions to church and village are easily the largest regular household expenditure at Tala $1m per week. Telephone and Electricity Bills are also substantial at $274,000 and $314,000 per week respectively.
- The average Samoan household weekly expenditure is $575 (highest in Savaii at $638 and lowest North West Upolu at $460.
- The average Samoan household weekly income is $445 (highest in Apia Urban Area at $491 and lowest in North West Upolu at $337.
- Ten percent (10%) of households with the highest income earned 31% of total income.
- Ten percent (10%) of households with the lowest income earned 1.8% of total income.
- 51% of household expenditure is on Food.
- 8.5%of household expenditure is on Transport
- 2.2% of household expenditure is on Alcohol and tobacco

- 42% of total income received by household is from primary income.

- Total value of home grown/produced items used by household is $2,086,000 (20% of total income)

- Total value of home grown/produced items sold by household is $360,000 (3% of total income)

- Total value of home grown/produced items given as gifts is $564,000 (5% of total income)

- Total value of items received as gift is $1,670.000 (16% of total income)

- Total weekly value of remittance received (in cash and in kind) is $1,079,00.(10% of total income)

APPENDICES

1. Key Definitions

Household Income

The summarization done for the total household income is in accordance with the United Nations "Provisional Guidelines in Statistics of Income, Consumption and Accumulations" which largely corresponds to the UN System of National Accounts (SNA). Based on the SNA, the different components of household income is summarized as follows:

Primary Income

1) Compensation of Employees
   - Wages and salaries
     i. In cash
     ii. In Kind

   - Employer's contribution to social security and similar schemes.

2) Income of members from producer's cooperatives

3) Gross entrepreneurial income of unincorporated enterprises(Household operated activities), including withdrawals from quasi-corporate enterprises.

Property Income received:

1) Imputed rents of owner occupied dwelling
2) Interests received
3) Dividend received
4) Rent, royalties, patents, copyrights, etc. received by any member of the households.

Current transfers and other benefits received:

1) Social security benefits
2) Pension and life insurance annuity benefits
3) Other current transfers (e.g., gifts received)

For HIES, not all components were gathered, Data on imputed rent of owner occupied dwelling unit will be very difficult to collect since in the rural areas the concept of renting a dwelling unit is almost non-existent. People in villages are very much willing to let other people stay in their houses without any formal agreement on the payment of rent. It is common practice that it is up to the dweller how much they are willing to give to the owner, not as payment for rent but as gift. This means that if the respondents will be asked on how much they are going to charge if the house will be rented to others, the data that will be gathered will not be reliable. For national account use, it was mentioned above that this data should be gathered through other means or from administrative records of other offices.

Interests received were gathered in the individual form, unfortunately the code used is the same as for loans received. There is no way that the two can be separated. Instead, the code is considered as loans received, since it is very seldom that people will charge interests on money borrowed from them.

Other components were gathered directly and indirectly in household, individual and diary forms. The components of personal income are already discussed above. Most of the income comes from the reported personal receipts. Receipt from sale of home grown/ produced items reported in the individual from was reconciled with reports in the diary form. Also, receipts from remittances from abroad and from domestic sources were also reconciled with the corresponding report in the diary form. For gifts received, the reconciled reports from all type of forms were used. In summary, the components of total household income is presented in the formula below:

Total Household Income =Total Personal Primary Income+
Total Personal Other Sources of Income +
Value of Home grown / produced that are consumed

\+ Value of Home grown / produced that are sold +

Value of Home grown / produced that are given away
As gifts +
Value of all items received as gifts

Excluded in the household income is the value of livestock received as gift. Other receipts were also excluded in the Computations of household income but rather are summarized into the data item Other Receipts. These are from the following sources:

- Gambling
- Sale of possessions or durable items (durable is for verification)
- Loans /interest (cannot be separated, interest must be other sources and loans must be other receipt, this was treated as other receipt since it is least likely that Samoans will pay interest on borrowed money from other person/household)
- Previous employment (back pay)
- Compensation, NPF
- Clubs, Organization, Cooperatives
- Pool Table (winnings)

Household Expenditure

The HIES technique of measuring consumption expenditure is in accordance with SNA definition. The "acquisition" approach was used in collecting data on actual purchases, i.e, the amount spent on purchases and not the actual value of consumed.

For home produce, the "consumption or use" approach was used since the households were asked to list down the estimated values of home produced items that were consumed. For other goods received in kind the value of goods was reported and not the value of consumed. In summary the components of household consumption expenditure is shown in the formula:

Total Household Expenditure = Expenditure on items bought and services[1] +

Value of home grown / produced that are consumed +
Value of Home grown / produced that are given away as gifts +
Value of all items received as gifts.

Expenditure on the purchase of livestock and major repair of houses or construction of new one are not included in the household consumption expenditure. These expenditure items are included in the Other Disbursements data item.

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[1] This includes items bought in cash and on credit that are given away as gifts.

3 Sample Error Estimates

Statistical Accuracy Measure, SAMOA

Data Item	Total Estimates	Standard Error	Relative
Total Weekly Income	10,332,751	697,421	6.75
Total Weekly Expenditure	13,362,608	939,581	7.03
Food	6,782,421	497,074	7.33
Alcohol	89,383	12,048	13.48
Tobacco	204,006	19,343	9.48
Clothing	283,199	29,995	10.59
Housing	679,723	66,288	9.75
Durable Furnishing	830,435	77,354	9.31
Health Care	260,823	20,326	7.79
Transportation	1,130,809	88,667	7.84
Education	155,112	13,706	8.84
Recreation	485,653	59,904	12.33
Miscellaneous	1,854,453	171,547	9.25
Handicraft	606,590	107,239	17.68
Average Weekly Income	444.53	0.12	1.61.
Average Weekly Expenditure	574.88	21.75	3.78
Food	291.79	11.37	3.90
Alcohol	3.85	0.44	11.34
Tobacco	8.78	0.64	7.28
Clothing	12.18	0.97	7.96
Housing	29.24	2.68	9.15
Durable Furnishing	35.73	2.66	7.44
Health Care	11.22	0.58	5.17
Transportation	48.65	3.23	6.64

Education	6.67	0.51	7.63
Recreation	20.89	2.38	11.41
Miscellaneous	79.78	5.16	6.47

3 Tables

1 Demographic and Personal

1.1 Household Size by Sex of Head of Household by Region

1.2 Number of Persons by Main Daily Activity and Sex by Age Group, by Region

1.3 Persons 15 years and over who receive Income, by Age Group, Sex and Region

1.4 Person Main Daily Activity, by Highest Level of Education and Region

1.5 Persons Highest Level of Education by Age, Sex and Region

1.6 Persons Marital Status by age, Sex and Region.

1.7 Person 10 years and over by Type of activity, by Age Group,Sex and Region.

1.8 Persons 15 years and over by Occupation Subgroup, Age Group, Sex and Region.

1.9 Annual Income of Persons 15 years and over, by Occupations and Sex, by Region.

2 Income and Expenditure

2.1 Household General Regular Expenditures (weekly), by Region.

2.2 Weekly Income and Expenditure by Region.

2.3 Household weekly Income Distribution by Total Income Decile by Region.

2.4 Household Weekly Income and Expenditure by Total Income Decile by Region.

2.5 Average Weekly Income and Expenditure by Total Weekly Income Decile by Region.

2.6 Percentage Distribution of Total Weekly Expenditure by Expenditure Group by Region.

2.7 Total Weekly Expenditure by Expenditure Group by Region.

2.8 Percentage Distribution of Total Weekly Expenditure by Major Expenditure Group by Region.

2.9 Total Weekly Expenditure by Major Expenditure Group by Region.

2.10 Percentage of Income Received from Different Sources by Region

2.11 Household Weekly Income by Source of income by Region.

2.12 Percentage Distribution on Total Weekly Expenditure on Major Expenditure Group by

Income Group by Region.

2.13 Total Weekly Expenditure on Major Expenditure Group by Income Group by Region.

2.14 Percentage Distribution of Value of Items Bought on Cash and on Credit (weekly) by Region.

2.15 Value of Items Bought on Cash and on Credit (weekly) by Region.

2.16 Value of Items Bought on Cash and on Credit (weekly) by Major Expenditure Group by Region.

2.17 Percentage Distribution of the Value on Items Bought on Cash and on Credit by Major Expenditure Group by Region.