

TOKELAU 2015/16 HOUSEHOLD INCOME AND EXPENDITURE SURVEY (HIES)

METHODOLOGICAL REPORT



Tokelau National Statistics Office

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1. SURVEY STRATEGY

HIES SAMPLE

- i. Tokelau Household Income and Expenditure Survey (HIES) provides some estimates at the national level only.
- ii. The sampling frame is based on the household (HH) listing from the December 2013 population count.
- iii. The sample selection is a one-stage sample, HHs are selected straight from the updated HH listing within each island.
- iv. The three islands will be represented in the sample as show in table 1:

Table 1: Sample plan for Tokelau HIES 2015/16

	Н	Hs	Number of rounds
	2013 listing	2015 HIES sample	Number of rounds
Atafu	91	40	4
Fakaofo	86	40	4
Nukunonu	74	40	4
Tokelau	251	120	4

- v. In order to cover the full year, the field operation was divided into four rounds. Every three months a round of HIES collection happened in the field (simultaneously on all three islands), as a rolling sample. During each round, ten HHs in each island were interviewed. Another ten HHs were interviewed three months later during the next round (etc).
- vi. Sample over time and islands: the following table presents the detail of the sample and the schedule.

Table 2: Sample size per atoll per round (number of HHs)

TEAM	Round 1	Round 2	Round 3	Round 4	TOTAL
Team 1: Atafu	10	10	10	10	40
Team 2: Fakaofo	10	10	10	10	40
Team 3: Nukunonu	10	10	10	10	40
Tokelau	30	30	30	30	120

Each quarter one round of survey happened which allows to cover the full year.

HIES PLAN (STAFF)

vii. Each team comprises:

- a. One enumerator (in charge of ten HHs each round);
- b. One data entry operator (ten questionnaires to enter each round).

viii. Table 3 below:

Table 3: Total number of staff required

Islands	Team required	Supervisor	Enumerators	Data entry	TOTAL
	(a)	(b)	(c)	(d)	(e) = (b)+(c)+(d)
Atafu	1	0	1	1	2
Fakaofo	1	0	1	1	2
Nukunonu	1	0	1	1	2
Apia office	0	1	0	0	1
Tokelau	3	1	3	3	7

(a) One team per island was recruited and trained (two staff: one enumerator + one data entry operator); no provision for backup/reserve staff was planned.

(b) The manager was based in the Apia office and visited the teams before second and third.

(c) All the staff were trained together on the questionnaire and data entry, they can swap.

(d) Data entry and editing were done during each round on laptops by the data entry operator.

(e) In total seven staff were required, and six staff were recruited (two in each atoll).

(f) A new enumerator was recruited and trained for round 3 in Atafu; for round 4 only one staff remained in Atafu and Fakaofo.

- ix. The HIES training by the Pacific Community (SPC) took place in Nukunonu in April 2015 just before round 1.
- x. The six staff were selected in advance (two on each atoll) and those from Atafu and Fakaofo travelled to Nukunonu to attend the training (questionnaire and data entry).

TEAM	TRAINING	Round 1		Round 2		Round 3	Round 4
	April (2015)	May (2015)	July (2015)	August (2015)	October (2015)	November (2015)	February (2015)
Team 1: Atafu		Atafu		Atafu		Atafu	Atafu
Team 2: Fakaofo	TRAINING	Fakaofo	REFRESHER ON ISLAND (supervisor)	Fakaofo		Fakaofo	Fakaofo
Team 3: Nukunonu	IN APIA	Nukunonu		Nukunonu	(supervisor)	Nukunonu	Nukunonu
Tokelau		30		30		30	30

Table 4: HIES planning – 12 months coverage in 4 rounds

HIES Training in Nukunonu (two weeks, SPC – TNSO staff): all HIES staff including manager from TNSO (ten people approximately in total) were trained.

Refresher training happened before the beginning of the second and third round (including training for new staff).

After the first round, a data assessment report was provided to TNSO.

HIES SCHEDULE

A round of survey is a three-week period that allows a team to:

- Interview ten HHs (each enumerator);
- Enter and edit all data collected.

The following chart presents a round of HIES for one team. In total ten HHs were interviewed (HH1 to HH10) – this needed to be tied in with the boat schedule to and within Tokelau, round 1 in particular.

On day 1 each enumerator visited five HHs (HH1, HH2, HH3, HH4 & HH5), on day 2 s/he visited the other group of 5 (HH6, HH7, HH8, HH9 & HH10). On day 3, s/he came back in the first group of HHs visited on day 1 (HH1, HH2, HH3, HH4 & HH5). In total seven visits minimum were done in each selected HH.

Enumerators had to complete the modules in the first week (day 1 to 7), and transferred them to the data entry operator for data entry and editing. All errors detected by the system were reported on an error list. Those errors had to be treated by the enumerators for corrections during the second week of interviews.

In terms of data entry, all the modules were supposed to be entered during the first week of the round. The second week of the round was dedicated to diary 1, and the last week was dedicated to the entry of diary 2. At the end of the round, all modules and diaries were supposed to be entered and edited (and corrected).

Table 5: Round schedule

	Enumerator	Data entry
Week 1 (day 1 to 7)	 Drop off diary 1 Interview all modules (visit 1 to 3) Three diary checks (visit 1 to 3) 	 Entry of modules 1 to 4 for ten HHs (40 modules to enter)
Week 2 (day 8 to 14)	 Pick up diary 1 Drop diary 2 Check diary 2 (visit 4 to 7) 	 Entry of diary 1
Week 3 (day 15 to 20)	 Last visit (visit 8) Final checks Pick up diary 2 	 Entry of diary 2

Table 6: One round of HIES collection - Tokelau HIES 2015

Rank of the day	Monday 1	Tuesday 2	Wednesday 3	Thursday 4	Friday 5	Saturday 6	Sunday 7	Monday 8	Tuesday 9	Wednesday 10	Thursday 11	Friday 12	Saturday 13	Sunday 14	Monday 15	Tuesday 16
HH group 1	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	
HH group 2		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15
	VIS	IT 1	VISI	Т 2	VI	SIT 3		VIS	IT 4	VISI	T 5	VI	SIT 6		VIS	IT 7
Enumerator 1	HH1	HH6	HH1	HH6	HH1	HH6		HH1	HH6	HH1	HH6	HH1	HH6		HH1	HH6
	HH2	HH7	HH2	HH7	HH2	HH7		HH2	HH7	HH2	HH7	HH2	HH7		HH2	HH7
	HH3	HH8	HH3	HH8	HH3	HH8		HH3	HH8	HH3	HH8	HH3	HH8		HH3	HH8
	HH4	HH9	HH4	HH9	HH4	HH9		HH4	HH9	HH4	HH9	HH4	HH9		HH4	HH9
	HH5	HH10	HH5	HH10	HH5	HH10		HH5	HH10	HH5	HH10	HH5	HH10		HH5	HH10
Data entry	Data entry of module 1 to 4 HH1 to HH10 + editing of modules			REST	E	diting of in Data enti	formation entry of diary we	tered from t ek 1 for HH:	the modu 1 to HH10	les	REST	Final Data entry o HH1 to	edits liary week 1 9 HH18			
	VIS	IT 1	VISI	т 2	VI	SIT 3		VIS	IT 4	VISI	Т 5	VI	SIT 6		VIS	IT 7
Description of field tasks		-	nterview of m	nodules 1 to	4				- Feedback	k from data ed - Check & picl	iting in moc < up Diary 1	lules 1 to	4		- Final checks 1 to 4	in modules
	- Drop off diary week 1 - Check diary week 1					- Drop off week 2	Diary 2	-	Check diary	2 week 2			 Final check of Pick up diary 	liary 2 week 2 v 2 week 2		

Day 17 to 21: Final checks and data entry diary 2 weeks HH1 to HH10.

2. RESPONSE RATES

This is the status of the questionnaires after the field operation had been fully completed:

Table 7: HH response status per round

			Round 1	
Atoll	Set A	Set B (replacement)	Total replacements	Reason for replacements
Atafu	7	3	4	2 overseas / 2 refusals
Fakaofo	8	2	3	1 refusal / 2 absence
Nukunonu	9	1	1	1 refusal
Total	24	6	8	

			Round 2	
Atoll	Set A	Set B (replacement)	Total replacements	Reason for replacements
Atafu	8	2	2	2 absence
Fakaofo	8	2	2	2 absence
Nukunonu	6	4	4	4 absence
Total	24	6	8	

			Round 3	
Atoll	Set A	Set B (replacement)	Total replacements	Reason for replacements
Atafu	7	3	Not reported	Not reported
Fakaofo	9	1	Not reported	Not reported
Nukunonu	7	3	Not reported	Not reported
Total	23	7	Not reported	

			Round 4	
Atoll	Set A	Set B (replacement)	Total replacements	Reason for replacements
Atafu	6	3	Not reported	Not reported
Fakaofo	8	2	Not reported	Not reported
Nukunonu	9	1	Not reported	Not reported
Total	23	6	Not reported	

Household listing of round 3 and 4 were not reported, thus the total number of replacements and the reason for replacements are not stated.

Overall, 99% of the response rate objective was achieved, and only 1 HH is missing.

Table 8: Response rate by atoll

		Number of	Inte	erviewed	нн			
	Listed (2013)	HIES Selected set A	HIES replacement set B	Set A	Set B	Total	Replacement rate	Response rate
1. Atafu	91	40	20	28	11	39	28%	97%
2. Fakaofo	86	40	20	33	7	40	17%	100%
3. Nukunonu	74	40	20	31	9	40	22%	100%
Tokelau	251	120	60	92	27	119	23%	99%

One questionnaire was not included in the analysis for Atafu because too much information was missing, especially in the income module (4). This is why Atafu reports only 39 forms instead of 40.

3. DATA QUALITY - DIARY

VALIDATION OF DIARY WEEKS

If a very small number of items was declared in either week, week 1 or week 2 was sometimes not included. The factor (number of items reported week 1 / week 2) determines the choice of keeping/dropping any diary item.

The following table presents for each interviewed HHs the number of items reported in week 1, week 2, the ratio and the choice.

HIES ID	Items week 1	Items week 2	Total both weeks	W1/W2 ratio	Source diary kept
308	1	18	19	0.1	Week 2
318	2	22	24	0.1	Week 2
319	19	49	68	0.4	Both
220	12	29	41	0.4	Both
143	10	23	33	0.4	Both
114	12	27	39	0.4	Both
333	9	20	29	0.5	Both
138	14	31	45	0.5	Both
155	21	44	65	0.5	Both
237	7	14	21	0.5	Both
119	18	34	52	0.5	Both
159	21	39	60	0.5	Both
343	18	33	51	0.5	Both
219	18	32	50	0.6	Both
102	27	47	74	0.6	Both
235	11	19	30	0.6	Both
204	12	20	32	0.6	Both
151	20	33	53	0.6	Both
337	23	37	60	0.6	Both
203	18	28	46	0.6	Both
249	17	26	43	0.7	Both
113	10	15	25	0.7	Both
310	24	36	60	0.7	Both
210	29	42	71	0.7	Both
139	9	13	22	0.7	Both
104	15	21	36	0.7	Both
327	25	35	60	0.7	Both
154	25	34	59	0.7	Both
354	20	27	47	0.7	Both
221	12	16	28	0.8	Both
341	30	40	70	0.8	Both
140	17	22	39	0.8	Both
342	21	27	48	0.8	Both
350	7	9	16	0.8	Both
347	25	32	57	0.8	Both
346	27	34	61	0.8	Both
141	25	31	56	0.8	Both
349	23	28	51	0.8	Both
348	19	23	42	0.8	Both

Table 9: Number of items in diary 1 and 2 and diary kept for HIES analysis by HHs

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HIES ID	Items week 1	Items week 2	Total both weeks	W1/W2 ratio	Source diary kept
201	15	18	33	0.8	Both
304	16	19	35	0.8	Both
111	37	43	80	0.9	Both
148	25	29	54	0.9	Both
309	19	22	41	0.9	Both
109	28	32	60	0.9	Both
328	43	49	92	0.9	Both
135	25	28	53	0.9	Both
239	37	41	78	0.9	Both
158	21	23	44	0.9	Both
336	22	24	46	0.9	Both
311	25	27	52	0.9	Both
332	25	27	52	0.9	Both
356	15	16	31	0.9	Both
252	16	17	33	0.9	Both
255	18	19	37	0.9	Both
301	18	19	37	0.9	Both
323	24	25	49	1.0	Both
236	52	54	106	1.0	Both
247	20	20	40	1.0	Both
256	42	41	83	1.0	Both
238	29	28	57	1.0	Both
132	21	20	41	1.1	Both
208	34	32	66	1.1	Both
120	29	27	56	1.1	Both
217	14	13	27	1.1	Both
213	12	11	23	1.1	Both
232	21	18	39	1.2	Both
305	25	21	46	1.2	Both
351	18	15	33	1.2	Both
150	23	19	42	1.2	Both
211	28	23	51	1.2	Both
339	28	23	51	1.2	Both
233	5	4	9	1.3	Both
253	15	12	27	1.3	Both
234	29	23	52	1.3	Both
103	32	25	57	1.3	Both
218	13	10	23	1.3	Both
125	33	25	58	1.3	Both
320	33	25	58	1.3	Both
142	16	12	28	1.3	Both
209	32	24	56	1.3	Both
126	35	26	61	1.3	Both
108	58	43	101	1.3	Both
106	34	25	59	1.4	Both
224	48	35	83	1.4	Both
160	22	16	38	1.4	Both
222	28	19	47	1.5	Both
226	28	19	47	1.5	Both
127	33	22	55	1.5	Both
302	21	14	35	1.5	Both
258	20	13	33	1.5	Both

HIES ID	Items week 1	Items week 2	Total both weeks	W1/W2 ratio	Source diary kept
352	38	24	62	1.6	Both
206	46	29	75	1.6	Both
147	43	27	70	1.6	Both
207	24	15	39	1.6	Both
223	34	21	55	1.6	Both
338	30	18	48	1.7	Both
240	37	22	59	1.7	Both
353	36	21	57	1.7	Both
121	47	27	74	1.7	Both
124	47	26	73	1.8	Both
306	21	11	32	1.9	Both
117	48	25	73	1.9	Both
340	49	25	74	2.0	Both
246	14	7	21	2.0	Both
307	14	7	21	2.0	Both
329	10	5	15	2.0	Both
116	29	14	43	2.1	Both
227	25	12	37	2.1	Both
324	23	11	34	2.1	Both
241	30	14	44	2.1	Both
322	14	6	20	2.3	Both
136	24	10	34	2.4	Both
254	48	20	68	2.4	Both
118	19	6	25	3.2	Week 1
326	42	13	55	3.2	Week 1
250	45	11	56	4.1	Week 1
134	55	3	58	18.3	Week 1
105	31		31	0.0	Week 1

For the low ratio (0.1) the total number of items reported in week 1 was much lower than the total number of items reported in week 2, and only week 2 is processed (HIES id 308 & 318).

For the high ratio (3+) there is a big drop between week 1 and week 2 meaning that only week 1 was processed (HIES id 118, 326, 250, 134, 105).

Table 10: Total number of forms per valid diary week

	2 weeks diaries	1 week diary	Valid forms
Atafu	36	3	39
Fakaofo	39	1	40
Nukunonu	37	3	40
Total	112	7	119

Table 11: Difference between week 1 and week 2 (average number of items reported per day)

	Total	Week 1	Week 2	Diff (%)
Atafu	3.09	3.16	3.02	-4.5%
Fakaofo	2.92	3.11	2.73	-12.03%
Nukunonu	2.79	2.73	2.86	4.8%
Total	2.94	3.0	2.87	-4.5%

Atafu is the atoll that reported the highest number of items per day in the diary (more than three on average) while Fakaofo and Nukunonu reported respectively 5% and 9% less.

Regarding the gap between week 1 and week 2, it is common to notice a drop in week 2 due to the combination of HH fatigue and lack of diary supervision from HIES staff in week 2. Fakaofo was highly impacted by this

problem, and it results in a drop of 12% in week 2. On the other hand, Nukunonu shows a higher number of items reported during week 2 which is a good sign but unusual.

Chart 1: Diary trend – Tokelau

Average number of items reported in the diary per day (day 1 to day 14)



Chart 2: Average number of items reported in the diary per week day (week 1 Monday to Sunday / Week 2 Monday to Sunday)



At the National level, the diary trend shows as expected some drops at the end of week 1 and 2 which correspond to week end days. During the week some small gaps appear and Friday seems to be the shopping day. The overall quality of diaries is good.

Chart 3: Diary trend by island and round

Average number of items reported in the diary per day per interviewed HH in the four survey rounds.







Atafu shows signs of enumerators fatigue in round 2 and 3 as the number of items reported in the diary severely dropped (from 3.5 to less than 2.5 in round 3). Overall there is no significant difference in between rounds, which is a good sign of quality in the diaries.

Chart 4: Average number of items per day per HHs 1



Nukunonu reported 10% less items than Atafu, and Fakaofo 6% less.

Diary coding

Looking at the quality of the coding in the diary (COICOP classification), Atafu reports the highest number of items with no codes or wrong codes.

Table 12: Code status in diaries by atoll

	Atafu	Fakaofo	Nukunonu	Total
total items	2139	1913	1921	5973
% wrong codes	8.5%	0.2%	2.5%	3.9%

All the missing codes were assigned and the wrong codes were amended based on the description of the items.

4. DATA QUALITY - MODULES

All inconsistencies and missing values were corrected using a variety of methods:

- 1. Manual correction: verified on actual questionnaires (double check on the form, questionnaire notes, local knowledge, manual verifications)
- 2. Subjective: the answer is obvious and can be deduced from other questions
- 3. Donor hotdeck: the value is imputed based on similar characteristics from other HHs or individuals (see example below)
- 4. Donor median: the missing values or outliers were imputed from similar items reported median value
- 5. Record deletion: the record was filled by mistake and had to be removed.

Several questions used the hotdeck method of imputation to impute missing and outlying values. This method can use one to three dimensions and is dependent on which section and module the question was placed. The process works by placing correct values in a coded matrix. For example in Tokelau the "Drink Alcohol" questions used a three-dimensional hotdeck to store in-range reported data. The constraining dimensions used are AGE, SEX and RELATIONSHIP questions and act as a key for the hotdeck. On the first pass the valid yes/no responses are place into this three-dimensional hotdeck. On the second pass the data in the matrix is updated one person at a time. If a "Drink Alcohol" question contained a missing response then the person's coded age, sex and relationship key is searched in the "valid" matrix. Once a key is found the result contained in the matrix is imputed for the missing value.

The first preferred method to correct missing or outlying data is the manual correction (trying to obtain the real value, it could have been miss-keyed or reported incorrectly). If the manual correction was unsuccessful at correcting the values, a subjective approach was used, the next method would be the hotdeck, then the donor median and the last correction is the record deletion.

Table 13 summarizes all problems detected in the modules. The questions in section S3.6.1 on cigarettes and alcohol consumption caused the highest number of errors (mainly missing information). The question Q30605 generated 269 errors (49.1% of the total expected answers) and 46 were imputed manually, 77 through hotdeck and 146 with the median.

Table 13: Numbers of imputations made by method of imputation.

	Questions	# errors	1 - Manual	2 - Subjective	3 - Hot-deck	4 - Median	5 - Record Deletion	Total	Percent	N
Q30605	How many cigarettes?	269	46		77	146		269	49.1%	445
Q30603	Did you smoke electronic cigarettes?	208	37		171			208	38.0%	445
Q30604	Did you smoke tobacco?	189	47		142			189	34.5%	445
Q30602	Did you drink alcohol?	183	46		137			183	33.4%	445
Q40106	What is your base salary?	117	43	69	4	1		117	21.4%	262
Q10205	Willing to work more?	102	102					102	18.6%	548
Q20131_2B	What is your secondary source of cooking water?	54	54					54	9.9%	119
Q20131_1B	What is your secondary source of drinking water?	53	53					53	9.7%	119
Q20131_3B	What is your secondary source of cleaning water?	53	53					53	9.7%	119
Q20133_B	What is your secondary source of sanitation facility?	42	42					42	7.7%	119
Q20356	Location of the provider?	28	28					28	5.1%	490
Q20355	Amount paid	22	7			15		22	4.0%	490
Q20352	Expenses code	21	21					21	3.8%	490
Q40110	Total wages and salary	21	6	10	4	1		21	3.8%	262
Q40105	Sector private/public?	19	19					19	3.5%	262
Q10210	Willing to work more in secondary job?	17	17					17	3.1%	548
Q40706	Total amount received	17	17					17	3.1%	92
Q20353	Description of the item	16	16					16	2.9%	490
Q20125	Secondary source of lighting	15	15					15	2.7%	119
Q20354	Beneficiary of the expenditure	15	15					15	2.7%	490
Q40302	Did you pay some staff to help you in fishing activities?	12	12					12	2.2%	94
Q40707	Where was the money received?	12	12					12	2.2%	92
Q10106A	Day of birth	10	3		7			10	1.8%	548
Q10106B	Month of birth	10	3		7			10	1.8%	548
Q20127	What is the secondary cooking facility?	10	10					10	1.8%	119

5. DIARY VS MODULES: COMPUTATION OF ANNUAL FACTORS

All expenditure transactions are collected throughout the recall modules and the two weeks diary. Each module collects some transactions on specific topics, and diary covers all expenditure made by the HH members during 14 days. Those two sets of information provide different amounts and different periods of observation. They can be used separately or they can be combined, and it results in three options:

- Option 1: diary is the preferred source
- Option 2: recall is the preferred source
- Option 3: combination of both.

The selected option impacts on the annual factor that will be used to derive the annual amount (depending on the period of observation in number of days).

Option	Length of the recall period	Annual factor
1	14 days of observation	365 / 14
2	N days of recall period	365 / N
3	N + 14	365 / (N+14)

Table 14: Presentation of the three different options of annual factor computation

Option 3 is based on the fact that there is no overlapping between recall and diary period and the same transaction cannot be reported in both. If for the same items large amounts are collected in the diary and modules, option 3 is a good way to keep all information and to compute the annual factor on a longer period of time. Moreover option 3 can be used to compute the annual factor of items that were collected in the diary and not in the recall but that are not purchased on a regular basis (e.g. sandals for men).

The choice of option 1, 2 or 3 depends on the type of item and the amount collected in both recall and diary questionnaires. Going through the entire list of codes, each commodity code will be assigned one of the three options:

- Division 01 (Food and non-alcoholic beverages) was entirely sourced from the diary (as none of those items were covered in the recall questionnaires).
- Division 02 (alcohol and tobacco) was entirely sourced from both (option 3) as the recall questionnaire
 of alcohol and tobacco (7 days) is combined with all the alcohol and tobacco transactions collected in the
 diary (14 days) for a total period of 21 days.
- Division 03 (clothing), only sandals for men were sourced from the combination of diary and module as this item was not collected in the recall questionnaire on clothing but only in the dairy (annual factor = 365 / (3*30.4+14)). For the rest, the recall module on clothing was the only source used to derive the clothing expenditure.
- Division 04 (housing) is entirely sourced from recall sections:
 - o On utilities and tenure status (N = 30.4 days)
 - o Construction and improvement of the dwelling (N = 365 days).
- Division 05 (furnishing) comprises a large range of different items (durables, non-durables). The annual factor of each item within this division was computed at a very detailed level:

o All durables: furniture, HH textiles, appliances, tools and equipment, kitchen ware were sourced from the recall questionnaires

- o The non-durable goods:
 - eclectic accessories (torches, bulbs, batteries);
 - not purchased on a regular based are sourced from the recall questionnaire (e.g. torches, bulbs);
 - regularly purchase (e.g. electric batteries sourced from the diary).

• cleaning products and other non-durables HH goods (matches, candles...) are sourced from the diary

o domestic services are sourced from the recall questionnaire.

- Division 06 (health) are mainly sourced from the recall questionnaire (health section) except the medication result of the combination of the recall and diary (option 3).
- Division 07 (transport): except for fuel and car rental, all the items related to transport are sourced from the recall section on vehicle.

o Fuel: large amounts of fuel expenditure were collected in both recall (one month) and diary (two weeks); to achieve higher accuracy, the longest period is better which is why option 3 was used

o Same factor for car rentals, the entire period is kept (365 + 14 = 379 days).

- Division 08 (communication): all the communication items are sourced from the module.
- Division 09 (leisure and culture): all goods and services are sourced from the recall questionnaires.
- Division 10 (education): all goods and services are sourced from the recall questionnaires.
- Division 11 (hotels and restaurants): except the sandwiches (diary) all the items are sourced from the recall questionnaires.
- Division 12 (miscellaneous goods and services): except the personal care items (sourced from the diary) all the items in this division are sourced from the module.

All other items that belong to the non-consumption expenditure are sourced from the recall questionnaire (donations, investment).

Division / item	Source (1, 2 or 3)	Annual factor
01 – Food and non-alcoholic beverages	Dairy (1)	365/14
02 – Alcohol and tobacco	Mix (3)	365/(7+14)
03 – Clothing	Recall (2)	365/(30.4*3)
04 – Housing	Construction materials: recall (2) Utilities: recall (2)	365/(365) 365/30.4
05 – Furnishing	Large durables (2) Electric non-durables: non-regular (2) Electric non-durable: regular (1) Cleaning products (1)	365/365 365/365 365/14 365/14
06 – Health	Medication (3) Health consultation and test (2)	365/(365+14) 365/365
07 – Transport	Vehicles and maintenance (2) Transport services (2) Fuel (3) Car rental (3)	365/365 365/365 365/(14+30.4) 365/(14+365)
08 – Communication	Communication devices: recall (2) Communication services: recall (2)	365/365 365/30.4
09 – Leisure and culture	Paid tv / cable tv: recall (2) Other goods and services: recall (2)	365/30.4 365/365
10 – Education	Recall (2)	365/365
11 – Hotels and restaurants	Sandwiches: diary (1) Restaurants and hotels: recall (2)	365/14 365/365
12 – Miscellaneous goods and services	Hairdresser, Perfume: recall (2) Other personal care items: diary (1) Watch, jewelry: recall (2) Other services: recall (2)	365/(30.4*3) 365/14 365/365 365/365
901 – Donation and taxes	Recall (2)	365/365
902 – Investment	Recall (2)	365/365

Table 15: Selected option by types of item (COICOP expenditure classification)

6. HOME PRODUCTION SECTION

HIES collects subsistence items (fishes, pigs, poultry, fruits and vegetables) home produced by the HHs. All those home produced items were reported in the diary with: the detail description of the item (what type of fish...), the quantity and the unit and the estimated price (if they were to buy it).

In total 646 transactions were reported in the home production section of the diary (50% fish, 43% fruit, 5% vegetables and 25 other – crops and meat). Looking at the quantities, 49% of the home produced items were reported in piece (each), 42% in metric units (grams, kilograms or pounds) and 9% in other unit (mainly bundle, basket or plate).

Table 16: Number of transactions declared in the home production section by COICOP commodity and type of unit (piece, metric unit or other non-metric).

		# transaction reported				
		Piece	Unit metric	Other non metric	Total	
11201203	Other pork meat or pork meet ned	0	1	0	1	
11201511	Other chicken meat or chicken meat ned	1	0	0	1	
11302201	Barracuda	4	4	0	8	
11302205	Emperor	2	0	0	2	
11302208	Mackerel	7	5	0	12	
11302212	Mullet	4	4	0	8	
11302213	Parrot fish	3	9	0	12	
11302216	Rabbit fish	3	0	0	3	
11302217	Rainbow	1	0	0	1	
11302224	Trevally	11	6	0	17	
11302225	Trout (coral), Grouper	1	6	0	7	
11302227	Tuna - Skip Jack	9	30	2	41	
11302228	Tuna - Yellow Fin	5	13	0	18	
11302229	Tuna - Big Eye	2	2	0	4	
11302232	Tuna - all others	2	4	0	6	
11302233	Reef fish - unspecified	2	20	9	31	
11302237	Tuna - unspecified	6	12	1	19	
11302238	Fish - unspecified	76	34	8	118	
11302239	Mahi Mahi	1	2	0	3	
11302240	Wahoo	0	2	0	2	
11302241	Flying fish	2	0	0	2	
11302302	Crab - Coconut crab	0	5	0	5	
11302310	Shellfish, mussels, oysters	1	1	2	4	
11504004	Coconut oil	2	1	0	3	
11504005	Coconut milk, cream	1	3	1	5	
11604202	Fresh or frozen banana, green	9	9	5	23	
11604205	Fresh or frozen ripe bananas	4	3	4	11	
11604206	Fresh or frozen cooking bananas	2	3	4	9	
11604207	Fresh or frozen breadfruit	31	36	6	73	
11604209	Fresh or frozen coconut (green)	30	7	2	39	

	# transaction reported					
	Piece	Unit metric	Other non metric	Total		
11604210 Fresh or frozen coconut (dry)	43	13	3	59		
11604219 Fresh or frozen lemons/lime	7	0	0	7		
11604225 Fresh or frozen pawpaws	3	0	1	4		
11604232 Uto - coconut embryo	17	11	5	33		
11604233 Fresh or frozen pandanus fruit	0	9	1	10		
11704501 Fresh or frozen beans (green)	0	0	1	1		
11704511 Fresh or frozen chilli (local)	6	0	0	6		
11704514 Fresh or frozen cucumber	1	1	0	2		
11704517 Fresh or frozen head cabbage,	4	2	0	6		
11704518 Fresh or frozen lettuce, green Salad	2	0	1	3		
11704523 Fresh or frozen other cabbage	0	0	1	1		
11704524 Fresh or frozen pumpkin	1	2	0	3		
11704533 Other fresh or frozen vegetable or ned	1	4	6	11		
11704601 Potatoes	0	2	0	2		
11704603 Taro (samoa)	6	1	0	7		
11704604 Cassava, tapioca, manioc	1	0	0	1		
11704607 Pulaka swamp taro	0	2	0	2		
Total	314	269	63	646		

All the transactions were converted into metric values (grams) and the estimated amounts into cost per gram. The outlier's detection was based on an interval of +/- one time the interquartile range of the median cost per gram. All the transactions that showed a cost per gram lower or higher than this interval were considered as outliers and the quantity or the unit (or both) were corrected.

In total 60 transactions were modified in the home production section:

- 41 changes to the reported unit
- 13 changes to the reported quantity
- 16 changes to the reported unit and quantity

The valuation of home produced items is extremely complex to derive, especially in areas without markets that exchange currencies for products or services. This non-market environment is relevant in Tokelau because of its small size, remoteness and cultural link to fishing and agriculture products. HHs interviewed in the HIES, self-reported the amounts of their home produced items. For each agriculture item harvested, fish caught or pigs killed, HHs estimated the price of those items if they were to sell it locally. Because of this unique environment we have to be cautious in interpreting and comparing results from Tokelauan produced commodities such as fresh fish or breadfruit because of the HH's estimated amount. To be comparative to other consumed imported products it will be necessary to convert the items to single metric units then covert these items to their respective calorie equivalents. This process is normally undertaken in poverty analysis which defines a different approach to economic statistics. Hence this report referencing on only expenditure values of home-produced products may it be intrinsic, labour or subjective valuations.

7. IMPUTED RENTS CALCULATION

INTRODUCTION

The background information surrounding the need to recalculate the reported imputed rents in the Tokelau HIES is provided below. This paper is written to document the methodology for estimating the imputed rents using the User Cost Approach and the assumptions made in the model. Assistance from Mr Richard Wild, PFTAC, and Dr Jaap Jasperse, Tokelau NSO, is gratefully acknowledged.

METHOD

With exception of 6 percent of sampled HHs, who reported in-kind housing from their employer, the remaining dwellings in Tokelau are owner occupied (or occupied free of charge). As such, there is no rental market to compare the HH reported imputed rents with and limited opportunity to apply hedonic regression analysis as there's no market comparison. Considering these limitations, the user input cost method was adopted, which sets the value of imputed rent as the sum of estimated annual costs plus a return on capital. The Stata. DO file is provided below, however, in summary, the following approach and assumptions were applied:

- 1. The HHs were stratified by their number of rooms and the cost of construction was assumed to be:
 - a. Rooms = 2; cost = NZ\$45k
 - b. Rooms = 3; cost = NZ\$50k
 - c. Rooms = 4; cost = NZ\$55k
 - d. Rooms = 5+; cost = NZ\$60k
- To calculate the value of the housing stock, it was assumed that the life of a HH is 40 years (mean dwelling age = 23.34; max age = 50; median = 24.50; upper quartile = 30) and today's value of the dwelling was adjusted accordingly (those greater than or equal to 40 years, were valued as NZ\$0).
- 3. To calculate the value of the land, 20% of the assumed original construction cost was adopted.
- 4. To calculate the value of annual capital consumption, straight line depreciation was adopted and applied to the original assumed cost of construction and depreciated over a 40 year life (even for HHs that are greater than 40 years old).
- 5. Intermediate consumption costs (maintenance, but not capital improvements, such as renovations; no HHs reported having home insurance payments) were based on actual reported costs on a HH-by-HH basis.
- 6. The expected return on capital was assumed to be 4% per annum and applied to the housing stock value (current value of the dwelling + value of land).
- 7. The imputed rent per HH was calculated based on the consumption of fixed capital (depreciation) + intermediate consumption (maintenance, if any) + cost of capital.

.DO file

* IMPUTED RENTS ADJUSTMENTS (USER-COST APPROACH) *_____ * This .DO file is written to adjust the reported imputed rents using the following method: * 1. Assume cost of construction (using anecdotal data) based on the household size \ast 2. Apply an adjustment factor depending on the age of the house (% of it's life) * 3. Use the adjustment factor to determine the net value at current prices of the dwelling (cost * % of life left) * 4. Estimate value of land (e.g., 20% of the original value of the house) * 5. Value of stock = net value of dwelling + value of land * 6. Depreciate the value of the dwelling using: 1/(life) * 7. Estimate the expenditure on maintenance * 8. Estimate the expenditure on insurance * 9. Total intermediate consumption = maintenance + insurance * 10. Estimate the net operating surplus bytaking the next best investment (e.g., NZ bonds) and multiply by the net value of the stock * 11. Output = IC + CFC + NOS (Intermediate consumption + consumption of fixed capital formation + net operating surplus) * Need to adjust for quality of house over time use "C:\Users\michaels\Hightail\HIES\Tokelau HIES\Stata\F EXPENDITURE", clear tempfile temp1 temp2 keep id07 sample weight c hh tot per island code hc q20111 hc q20111 o hc q20112a hc q20112a_o hc_q20112b hc_q20112b_o 7// hc q20112c hc q20112c o hc q20113 hc q20114 hc q20115 hc q20116 hc q20117 fe coicop fe amount fe an amt /// fe_wght_an_amt fe_category fe_exp_type fe_description drop if inrange(fe category, 301, 304) collapse (mean) c_hh_tot_per hc_q20115 sample_weight island_code hc_q20116 hc_q20117 (sum) fe_amount fe_an_amt fe_wght_an_amt, by(id07 fe_coicop) keep if inrange(fe coicop, 42000000, 43211901) sort id07 collapse (mean) sample_weight island_code hc_q20116 hc_q20117 c_hh_tot_per hc_q20115 (sum) fe_amount fe_an_amt fe_wght_an_amt, by(id07 fe_coicop) * Generage age of dwelling gen dwel_age=(2015-hc_q20116) replace dwel age=. if hc q20116==9999 * Impute age of dwelling using median age of dwelling if age is missing egen median dewl age=median(dwel age) replace dwel_age= median_dewl_age if dwel_age==. drop median dewl age gen coicop class = int(fe_coicop/100000) gen median year = hc q20116 replace median year=. if median year==9999 egen median AGE=median (median year) gen median AGE 2=int(median AGE) replace median_year=median_AGE_2 if median_year==. drop median AGE drop median AGE 2 save "C:\Users\michaels\Hightail\HIES\Tokelau HIES\Stata\imputed rents", replace * Reshape to have COICOP items in colums and one row per household collapse (mean) sample_weight island_code hc_q20116 hc_q20117 c_hh_tot_per hc_q20115 (sum) fe_amount fe_an_amt //7 fe wght an amt, by(id07 coicop class) drop island_code hc_q20116 hc_q20117 c_hh_tot_per hc_q20115 fe_amount fe_wght_an_amt sample_ weight reshape wide fe an amt, i(id07) j(coicop class)

```
rename fe an amt421 imputed rent
rename fe an amt422 imputed rent 2
rename fe an amt431 maintenance 1
rename fe an amt432 maintenance 2
egen IMP RENTS=rowtotal ( imputed rent- imputed rent 2)
egen MAINT=rowtotal(maintenance 1- maintenance 2)
drop imputed_rent imputed_rent_2 maintenance_1 maintenance_2
drop if IMP RENTS==0
save `temp1', replace
use "C:\Users\michaels\Hightail\HIES\Tokelau HIES\Stata\imputed rents"
keep id07 sample_weight island_code hc_q20116 hc_q20117 c_hh_tot_per hc_q20115 dwel_age
median year
collapse (mean) sample weight island_code hc_q20116 hc_q20117 c_hh_tot_per hc_q20115 dwel_
age median_year ,by(id07)
merge 1:1 id07 using `temp1'
drop merge
drop if IMP RENTS==.
* Allocate value of house based on number of rooms
rename hc q20115 no rooms
* Assume the following costs:
* n = 2; cost = $45k
* n = 3; cost = $50k
* n = 4; cost = $55k
* n = 5+; cost = $60k
gen construction cost=60000
replace construction_cost=45000 if no_rooms==2
replace construction cost=50000 if no rooms==3
replace construction cost=55000 if no rooms==4
* Determine the life of a dwelling
univar dwel age
* mean age = 23.34
* max age = 50
* median = 24.50
* upper quantile = 30
* assumed household life = 40 years
gen life of house=40
* Apply adjustment factor based on life of the house
gen adjustment factor=dwel age/life of house
replace adjustment_factor=1 if dwel_age >40
* Generate current value of housing stock
gen housing_stock=construction_cost*(1-adjustment_factor)
* Estimate the value of land
gen land value=0.2*construction cost
* Estimate value of stock
gen stock value=housing stock+land value
* Depreciate the value of the dwelling based on construction value
gen depreciation= construction cost/ life of house
* Estimate the cost of capital
gen cost of capital=stock value*0.04
* Now we can get total imputed rents
order MAINT depreciation cost of capital
egen imputed_rents_cost_approach=rowtotal(MAINT-cost_of_capital)
gen imp_rents_wght_cost_approach=(imputed_rents_cost_approach*sample_weight)
drop
*collapse (sum) imputed_rents_cost_approach imp_rents_wght_cost_approach
```

DISCUSSION

This paper is written to serve as a discussion point between the Tokelau NSO, PFTAC¹ and SPC in regards to the reported imputed rents in the Tokelau 2015/16 HIES. Reported imputed rents amount to 19.2% of total HH expenditure (NZ\$1,512,700 of NZ\$7,866,700 total expenditure = NZ\$3.58 per person per day).

The absence of a market-based rental market in Tokelau makes it difficult to verify and validate the reported imputed rents and, as such, it is unknown as to whether the reported imputed rents are realistic. Three methods are used to help to verify if the reported imputed rents, including:

- 1. Assessing the distribution of imputed rents and imputing outliers based on:
 - a. Imputing outliers beyond 1.5 of the interquartile range
 - b. Imputing the reported median
 - c. Imputing the reported average
- 2. Identifying significant HH characteristics to impute based on regression results
- 3. Applying the cost approach

Summary of results

- Imputing outliers (using varying methods) does not significantly change the imputed rents estimates (maximum reduction from 19.22% to 17.62%).
- The data are too limiting and the lack of comparable market data are too limiting to conduct regression analysis.
- The results from the cost approach (using the best available information) generate imputed rents estimates of NZ\$736,294 (10% of total HH expenditure, with sensitised results under different scenarios increasing to 24% of total HH expenditure).

Conclusion

- Although outliers exist (both high and low), normalising these do not significantly change the imputed rents estimates. This is indicative that there is a reasonable degree of consistency among HHs in their estimates.
- The cost approach, however, generates significantly lower imputed rents estimates that the owner-occupier estimates. The cost approach, using the best available information, generates an imputed rents estimate of around 10% of total HH expenditure.

This represents a reduction from NZ\$1,512,700 reported by the owner occupier (19.2% of total expenditure) to NZ\$708,463.

Sensitising the assumptions in the cost approach by changing a) cost of construction, b) life of a HH, and c) cost of maintenance, increases imputed rents proportion of expenditure to 11%, 18% and 24% respectively.

¹ PFTAC is the Pacific Financial Technical Assistance Centre of the International Monetary Fund (IMF). It is based in Suva, Fiji.

8. CENSUS VS HIES DATA

Knowing that the census provides exact indicators and HIES only estimate a proxy, it is always interesting to compare both datasets and check the gaps on a list of selected items:

The last census in Tokelau was conducted in 2011, four years before HIES. This time difference can explain a certain deviation. The next census is due on 18 October 2016, about the time of publication of this report. It would provide further and more up-to-date material for comparison.

Table 17: Comparison between census and HIES outputs

	2011 census	2015 HIES
Population living in Tokelau	1,143	1,159
pop < 30	58%	55%
median age	24	25
% married (45-49 years old)	90%	89%
% adult smokers	48%	42%
% 15-19 smokers	23%	19%
% smokers (20-29 years old)	70%	54%
% smokers (30-39 years old)	57%	61%
% < 15 years old and + still in school	10%	14%
% dwelling with 3 rooms	45%	34%
% dwelling using water tank for drink	86%	86%
% dwelling using gas stove	57%	57%
% dwelling using kerosen stove	38%	35%
% dwelling accessing internet	19%	42%
% population accessing internet	40%	56%
% dwelling connected to sky Tv	27%	18%
% dwelling - radio	68%	50%
% dwelling - Tv	70%	66%
% dwelling - computer	50%	56%
% dwelling - freezer	90%	91%
% dwelling - washing machine	70%	88%
% dwelling - telephone	70%	87%
% HHs with wage income	77%	90%
% HHs with remittances	20%	19%
% HHs with pension	30%	17%
% of hhs earning more than NZ\$15,000	66%	80%

9. CLASSIFICATION OF INCOME AND EXPENDITURE

On the final consumption side the Classification of Individual Consumption by Purpose (COICOP – UN STATS) was used to code all the items at the commodity level. In terms of non-consumption expenditure, some extra codes were created in addition to the international COICOP:

• Division 90: non consumption expenditure (SPC – Statistics for Development Division (SDD)) covers:

o All the donation HHs made to church, schools, community or remittance send to support family

o Taxes and fines HH might pay to the Government

o Investment expenditure-related to the land or the house (purchase, major renovation or improvement) and the acquisition of plants (water tank, generator, solar panel)

o The acquisition of major equipment (boat)

o The intermediate expenditure acquired in order to conduct any subsistence activities (agriculture, livestock, fishing or handicraft) or non-subsistence (any other business).

The Pacific Classification of Income (PACCOI – SPC – SDD) was used to code all the income transactions.

Both classifications are presented in this section. Regarding the classification of occupation and industry, the international ISCO and ISIC have been used.

Table 18: Classification of expenditure (aggregated levels)

COICOP DIVISION						
[01]	Food and non-alcoholic beverages					
[02]	Alcoholic beverages, tobacco and narcotics					
[03]	Clothing and footwear					
[04]	Housing, water, electricity, gas and other fuels					
[05]	Furnishings, HH equipment and routine HH maintenance					
[06]	Health					
[07]	Transport					
[08]	Communication					
[09]	Recreation and culture					
[10]	Education					
[11]	Restaurants and hotels					
[12]	Miscellaneous goods and services					
[90]	Non-consumption expenditure					

Table 19: Classification of expenditure (aggregated to class level)

Division		Group		Class	
	Food & non-alcoholic beverages		Food	01.1.1	Bread & cereals
				01.1.2	Meat
				01.1.3	Fish & sea food
		1.1		01.1.4	Milk, cheese & eggs
				01.1.5	Oils & fats
01				01.1.6	Fruit
				01.1.7	Vegetables
				01.1.8	Sugar, jam, honey, chocolate & confectionery
				01.1.9	Food products nec
		1.2		01.2.1	Coffee, tea & cocoa
		1.2	Non-aconolic beverages	01.2.2	Mineral water, soft drinks, fruit & vegetable juices
			Alcoholic beverages	02.1.1	Spirits
	Alcoholic beverages, tobacco & narcotics	2.1		02.1.2	Wine
02				02.1.3	Beer
		2.2	Тоbассо	02.2.1	Торассо
		2.3	Narcotics	02.3.1	Narcotics
			Clothing	03.1.1	Clothing materials
	Clothing & footwear	3.1		03.1.2	Garments
02				03.1.3	Other articles of clothing & clothing accessories
05				03.1.4	Cleaning, repair & hire of clothing
		3.2	Footwear	03.2.1	Shoes & other footwear
				03.2.2	Repair & hire of footwear
	Unusing water electricity and 9 other fuels	4.1	Actual rentals for housing	04.1.1	Actual rentals paid by tenants
				04.1.2	Other actual rentals
		4.2	Imputed rentals for housing	04.2.1	Imputed rentals of owner occupiers
				04.2.2	Other imputed rentals
		4.3	Maintenance & repair of the dwelling	04.3.1	Materials for the maintenance & repair of the dwelling
04				04.3.2	Services for the maintenance & repair of the dwelling
04	nousing, water, electricity, gas & other rules	4.4		04.4.1	Water supply
			Water supply & miscellaneous services relating to the dwelling	04.4.2	Refuse collection
				04.4.3	Sewage collection
				04.4.4	Other services relating to the dwelling nec
		4.5	Electricity, gas & other fuels	04.5.1	Electricity
				04.5.2	Gas

Division			Group		Class	
04	Housing, water, electricity, gas & other fuels	4.5	Electricity, gas & other fuels	04.5.3	Liquid fuels	
				04.5.4	Solid fuels	
				04.5.5	Heat energy	
		5.1	Furniture & furnishings, carpets & other floor coverings	05.1.1	Furniture & furnishings,	
				05.1.2	Carpets & other floor coverings	
				05.1.3	Repair of furniture, furnishings & floor coverings	
		5.2	Household textiles	05.2.1	Household textiles	
				05.3.1	Major HH appliances whether electric or not	
05	Furnishings, HHs equipment & routine HH	5.3	Household appliances	05.3.2	Small electric HH appliance	
05	maintenance			05.3.3	Repair of HH appliance	
		5.4	Glassware, tableware & HH utensils	05.4.0	Glassware, tableware & HH utensils	
		55	Tools & equipment for house & garden	05.5.1	Major tools & equipment	
		5.5	Tools & equipment for house & garden	05.5.2	Small tools & miscellaneous accessories	
		5.6	Goods & convices for routing HH maintenance	05.6.1	Non durable HH goods	
		5.0		05.6.2	Domestic services & HH services	
	Health	6.1	Medical products, appliances & equipment	06.1.1	Pharmaceutical products	
				06.1.2	Other medical products	
				06.1.3	Therapeutic appliances & equipment	
06		6.2	Outpatient services	06.2.1	Medical services	
		6.2		06.2.2	Dental services	
		6.2		06.2.3	Paramedical serviecs	
		6.3	Hospital services	06.3.0	Hospital services	
	Transport	7.1	Purchase of vehicles	07.1.1	Motor cars	
				07.1.2	Motor cycles	
				07.1.3	Bicycles	
				07.1.4	Animal drawn vehicles	
		7.2	Operation of personal transport equipment	07.2.1	Spare parts & accessories for personal transport equipment	
07				07.2.2	Fuels & lubricants for personal transport equipment	
				07.2.3	Maintenance & repair of personal transport equipment	
				07.2.4	Other services in respect of personal transport equipment	
		7.3	Transport services	07.3.2	Passenger transport by road	
				07.3.3	Passenger transport by air	
				07.3.4	Passenger transport by sea & inl& waterway	

Division		Group			Class		
07	Transport	7.3	Transport services	07.3.5	Combined passenger transport		
				07.3.6	Other purchased transport services		
08	Communication	8.1	Postal services	08.1.1	Postal services		
		8.2	Telephone & telefax equipment	08.2.0	Telephone & telefax equipment		
		8.3	Telephone & telefax services	08.3.0	Telephone & telefax services		
			Audio-visual, photographic & information processing equipment	09.1.1	Equipment for the reception, recording & reproduction of sound & pictures		
				09.1.2	Photographic & cinematographic equipment & optical instrument		
		9.1		09.1.3	Inormation processing equipment		
				09.1.4	Recording media		
				09.1.5	Repair of audio-visual, photographic & information processing equipment		
			Other major durables for recreation & culture	09.2.1	Major durables for outdoor recreation		
	Recreation & culture	9.2		09.2.2	Musical instruments & major durables for indoor recreation		
				09.2.3	Maintenance & repair of other major durables for recreation & culture		
09		9.3	Other recreational items & equipment, gardens & Pets	09.3.1	Games, toys & hobbies		
				09.3.2	Equipment for sport, camping & open air recreation		
				09.3.3	Gardens, plants & flowers		
				09.3.4	Pets & related products		
				09.3.5	Veterinary & other services for pets		
		9.4	Recreational & cultural services	09.4.1	Recreational & sporting services		
				09.4.2	Cultural services		
				09.4.3	Games of chance		
		9.5	Newspapers, books & stationery	09.5.1	Books		
				09.5.2	Newspapers & periodicals		
				09.5.3	Miscellaneous printed matter		
				09.5.4	Stationery & drawing materials		
		9.6	Package holidays	09.6.0	Package holidays		
	Education	10.1	Pre-primary & primary education	10.1.0	Pre- primary & primary education		
		10.2	Secondary education	10.2.0	Secondary education		
10		10.3	Post-secondary non-tertiary education	10.3.0	Post- secondary non-tertiary education		
		10.4	Tertiary education	10.4.0	Tertiary education		
		10.5	Education not definable by level	10.5.0	Education not definable by level		

Division		Group			Class	
11	Restaurants & hotels	11.1	Catering services	11.1.1	Restaurants, cafes & the like	
				11.1.2	Canteens	
		11.2	Accomodation services	11.2.0	Accommodation services	
	Miscellaneous goods & services	12.1	Personal care	12.1.1	Hairdressing salons & personal grooming establishments	
				12.1.2	Electric appliances for personal care	
				12.1.3	Other appliances, articles & products for personal care	
		12.2	Prostitution	12.2.0	Prostitution	
		12.3	Personal effects nec	12.3.1	Jewellery, clocks & watches	
				12.3.2	Other personal effects	
		12.4	Social protection	12.4.0	Social protection	
12		12.5	Insurance	12.5.1	Life Insurance	
				12.5.2	Insurance connected with the dwelling	
				12.5.3	Insurance connected with health	
				12.5.4	Insurance connected with transport	
				12.5.5	Other Insurance	
		12.6	Financial services nec	12.6.1	FISIM	
				12.6.2	Other financial services nec	
		12.7	Other Services nec	12.7.0	Other services nec	
90	Non consumption expenditure	90.1	One way transfer	90.1.1	Cash donation & taxes	
		90.2	Investment	90.2.1	Investment	
		90.3	Loan payment	90.3.1	Loan payment	
		90.4	Intermediate expenditure	90.4.1	Intermediate expenditure	

Table 20: Classification of income (aggregated to class level)

Division	Group	Class				
		[1] Cash income from employers				
	[1] Employee benefits	[2] In-kind income from employers				
	[2] Business Income	[1] Profits or dividend distribution				
		[1] Cash from agricultural crops				
		[2] Subsistence from agricultural crops				
[1] Employment income	[3] Agriculture, fisheries, livestock and handicraft	[3] Cash from fisheries				
		[4] Subsistence from fisheries				
		[5] Cash from livestock & aquaculture				
		[6] Subsistence from livestock & aquaculture				
		[7] Cash from handicrafts				
		[8] Subsistence from handicrafts (for reference only)				
	[1] Home rental	-				
	[2] Land lease					
	[3] Interest gained from deposited cash					
[2] Property Income	[4] Interest gained from lending activities	[0] NO other detail required				
	[5] Royalties					
	[9] Other property income					
	[1] Social security					
	[2] Superannuation / Pension					
	[3] Child support					
[3] Iransfer Income	[4] Alimony	[0] No other detail required				
	[5] Grants, Scholarships and other grants					
	[9] Other transfer income					
	[1] Sale of property	[0] No other detail required				
	[2] Sale of motor vehicle					
	[3] Sale of major assets					
[4] Casual receipts and lump	[4] Inheritance					
Sum distributions	[E] Winnings from compling	[1] Cash winnings				
		[2] Prize winnings				
	[9] Other casual income	[0] No other detail required				
	[1] Cash gifts/remittances received	[1] Cash gifts/remittances received				
	[2] Cash purchased gifts received	[1] Cash purchased gifts received				
		[1] Home produced gifts received from agricultural crops				
[5] Gifts and remittances	[3] Home produced gifts received	[2] Home produced gifts received from fisheries and hunting				
	(non-cash)	[3] Home produced gifts received from livestock & aquaculture				
		[4] Home produced gifts received from handicrafts				
[C] Imputed rest	[1] Imputed rent of owner occupied HHs	[0] No other detail required				
loj imputed rent	[2] Imputed rent - live in dwelling for free					
		[1] Business				
	[1] Intermediate expenditure	[2] Agriculture				
[7] Intermediate (used to		[3] Fisheries				
compute net income)		[4] Livestock				
		[5] Handicraft				