

Yemen Household Budget Survey 2005-2006
Sample design

The 2005-06 Household Budget Survey (HBS) is an important resource to estimate poverty, its proximate causes and effects of public action on poverty. The HBS provides the database for monitoring poverty as Yemen has just started implementing its second PRSP (2006-2010). This is the third HBS since the unification in 1990.

The main objectives of the HBS 2005/2006 are:

1. Producing aggregates of the statistical indicators at the level of the urban and rural communities of each governorate in order to serve the purposes of economic and social development-planning on the central and local levels.
2. Updating the National Accounts estimates in order to enable specialists and development planners to determine each governorate's share in the GDP, through the household's consumption structures.
3. Collecting information about the variation in living standards between the urban and rural communities of each governorate, and between those of different governorates.

Sample Frame and Stratification

The sample frame for the HBS was the 2004 Population Census. Yemen consists of 21 governorates. The study population was sorted into 38 strata. 17 governorates were represented by two strata (urban and rural,) whereas Sana'a City and Aden are only urban and Raima and Sana'a Region are only rural. This resulted in 19 urban strata and 19 rural strata.

Within each stratum, the sample was selected in two stages. In the first stage, a certain number of Census Enumeration Areas (EAs) were selected with probability proportional to size (*pps*,) using as a measure of size the number of households according to the pre-census estimates available in January 2005. In the second stage, 12 households were picked from each EA by systematic equal probability sampling (*seps*).¹

In order to produce estimates of consumption in all governorates of both rural and urban populations, the total sample of 1,200 EAs was distributed across strata by a combination of allocation proportional to size and equal allocation (see Box 1.) The final sample allocation is as show in Figure 3.

¹ This design varies significantly from that used for the HBS 1998, where the study community was allocated in 12 strata, 7 of which were urban and 5 were rural, and each stratum consisted of several governorates, except the capital (Sana'a) and the city of Aden, which were considered two distinct urban strata. The sample size of the HBS 1998 was set at 15120 households drawn from 420 PSUs, cluster size was set at 18 households.

Box 1. Allocation of Sample across Strata

The results of the 1998 Household Budget Survey were used to assign the sample size that needed to obtain accurate data at governorate level. The procedure used in allocating the sample households for the HBS 2004/2005 had the following steps:

1. 50% of the total sample was distributed proportional to the household counts of the strata.
2. 50% of the total sample size was distributed uniformly amongst strata.
3. Since the larger variation of the living conditions in urban communities result in higher expected standard error for these communities (based on data from HBS 1998), the sample was redistributed between urban and rural strata to achieve uniform expected relative standard errors for overall urban and rural strata (RSE 1.1%). The total sample allocation had total of 9,228 urban and 5,172 rural households.
4. The results were adjusted to make the number of households in each governorate a multiple of 144 (12 EAs of 12 households each,) to facilitate the random allocation of the sample into the 12 months of fieldwork.

Figure 3
Yemen Household Budget Survey 2004-2005
Sampling strata, allocation of the sample and
Relative Standard Errors for Per Capita Consumption

Governorate	Household Counts			PSUs			Sample Households			RSE(%)		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
11 Ibb	49192	248894	298085	43	41	84	470	463	933	6.9	11.4	8.9
12 Abyan	13378	42113	55491	30	18	48	318	201	519	5.6	7.3	5.3
13 Sana'a city	240411		240411	156		156	1646	9	1655	4.4		4.4
14 Al Baydha	13364	52807	66172	29	19	48	327	222	549	5.2	9.2	6.7
15 Taiz	76238	276155	352394	56	40	96	582	450	1032	5.9	5.2	4.2
16 Al Jawf	7626	47572	55197	22	14	36	237	148	385	7.3	5.4	4.6
17 Hajjah	17383	173619	191003	30	30	60	339	346	685	5.7	6.3	5.5
18 Al Hodeidah	108546	236233	344779	75	33	108	841	377	1218	6.9	5.5	4.3
19 Hadramout	59131	58274	117405	41	19	60	463	203	666	5.9	4.3	3.7
20 Dhamar	24361	161412	185773	31	29	60	342	339	681	11.9	6.0	5.4
21 Shabwah	8538	41173	49711	21	15	36	198	161	359	7.9	12.6	10.5
22 Soddah	13634	70604	84238	28	20	48	324	219	543	5.2	5.6	4.7
23 Sanaa		116276	116276		24	24		267	267		6.7	6.7
24 Aden	86792		86792	72		72	716		716	4.6		4.6
25 Lahaj	8914	92977	101892	25	23	48	273	246	519	7.2	10.1	8.9
26 Marib	3530	23523	27053	22	14	36	224	158	382	7.6	13.1	10.7
27 Al Mahweet	4495	63710	68204	27	21	48	289	249	538	4.6	5.7	5.2
28 Al Mahrah	5426	5705	11131	12	12	24	137	144	281	14.8	12.4	9.6
29 Amran	18841	86340	105181	27	21	48	302	235	537	6.4	4.9	4.2
30 Al Dhalea	7696	50572	58268	22	14	36	233	156	389	11.0	6.9	6.1
31 Raimah		55072	55072		24	24	12	270	282		5.5	5.5
Total	768163	1902366	2670529	768	431	1200	8273	4863	13136	2.2	2.3	1.6

