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**ATTRITION IN THE KHAYELITSHA
PANEL STUDY (2000-2004)**

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Attrition in the Khayelitsha Panel Study (2000-2004)

Introduction

In the latter half of 2000, a survey of 2,644 adults (people aged eighteen years and older) was conducted in the Mitchell's Plain magisterial district of Cape Town by researchers from the University of Cape Town (UCT).¹ The main objective of the study was to probe labour-market behaviour, socio-economic characteristics and social/political attitudes amongst working class people.² The Mitchell's Plain magisterial district was chosen because it included the predominantly working class 'coloured' (i.e. mixed race) suburb of Mitchell's Plain as well as the major African townships of Khayelitsha, Langa, Gugulethu, Nyanga and Crossroads. Sixty-nine percent of respondents were African, 30% were coloured (with the remaining 1% comprising insignificant numbers of white and Indian people). Over half (52%) of African respondents in the survey (966 individuals) were living in the biggest African township: Khayelitsha. Appendix Figure 1 indicates the location of the Mitchell's Plain magisterial district in the Cape Town area. The enumerator areas for the 2000 survey are clearly marked.

In 2004, researchers from UCT's Centre for Social Science Research (CSSR) revisited the Khayelitsha respondents to see how their labour-market and health status had changed over time. Khayelitsha was selected because it is Cape Town's largest African township (36% of Africans living in Cape Town live in Khayelitsha) and because income distribution in Khayelitsha approximates that for Africans as a whole in Cape Town (see Table 1). Furthermore, as of 2001, Khayelitsha had become the first place to provide antiretroviral treatment for poor people living with HIV/AIDS. It was thus decided that a panel study of

¹ The survey was conducted under the auspices of the Southern African Labour and Development Research Unit (SALDRU) – a research unit which subsequently became part of the Centre for Social Science Research (CSSR). The survey was designed and managed by Owen Crankshaw, Dudley Horner, Murray Leibbrandt, Nicoli Nattrass, Jeremy Seekings and Mathew Welch.

² See Nattrass (2002), Seekings (2002), and Walker (2003), Skordis and Welch (2003), Schöer (2004) for analyses of labour-market behaviour and social attitudes using this innovative data set.

Khayelitsha residents could serve as a useful point of comparison for parallel panel studies of people on antiretroviral treatment in the area (see, for example, Coetzee and Natrass, 2004).

Despite the fact that the original study had not been designed as a panel study (and despite the fact that no attempt to track the respondents had been made in the intervening four years), the response rate was (as we argue below) reasonably good. This paper describes the two waves of this Khayelitsha panel study, and provides an analysis of attrition. The first wave of the data (KMP 2000) is publicly available in the Data First Resource Centre of the CSSR.

Table 1: Khayelitsha's Population and Income Distribution in Comparative Context

	<i>Khayelitsha</i>	<i>Cape Town (All Africans)</i>	<i>Cape Town (Coloureds)</i>	<i>Cape Town (Whites)</i>	<i>Cape Town (Total population)</i>
Population	327,355	916,540	1,392,673	542,554	2,893,244
Annual household income					
No income	25.0%	27.8%	7.2%	4.3%	13.1%
R1-R4,800	6.5%	6.2%	1.9%	0.7%	2.9%
R4,801-R9,600	15.2%	14.3%	7.9%	2.5%	8.5%
R9,601-R19,200	25.3%	23.1%	14.3%	4.1%	14.3%
R19,201-R38,400	17.8%	15.9%	22.5%	9.6%	16.8%
R38,401-R76,800	7.4%	7.7%	23.8%	18.7%	17.2%
R76,801-R153,600	2.1%	3.2%	15.2%	25.3%	14.1%
R153,601+	0.6%	2.0%	7.1%	34.8%	13.0%
Total	100%	100%	100%	100%	100%

This paper explores the nature of attrition between the two waves of this panel study. It shows that there is some attrition bias (particularly with regard to smaller households and shack dwellers) but that for most other observables, the bias is not serious and hence the panel study can be regarded as reasonably representative of the population that has been resident in Khayelitsha between 2000 and 2004.

The Sample for the 2000 Khayelitsha/Mitchell's Plain (KMP) Survey

The sample for the 2000 Khayelitsha Mitchell's Plain (KMP) survey was drawn using the 1996 population census. According to the census, there were 728,916 people (of whom 65% were African and 33% were coloured) living in the Mitchell's Plain magisterial district.

The survey sample was drawn using a two-stage cluster technique with the first stage selecting clusters of households based on the enumerator areas (EAs) as defined by the 1996 census, and the second stage entailing the selection of the households themselves. The EAs comprise neighbourhoods of between 50-200 households. They are determined by the Chief Directorate of Demography at Statistics South Africa and are designed to be homogenous with respect to housing type. EAs are stored as digital data using Geographical Information Systems (GIS) technology – which enables the boundaries of the various EAs to be superimposed on aerial images (orthophotos) along with additional information (such as street names). The 2000 KMP survey used orthophotos to locate and select respondents. Such innovative use of GIS technology has made survey design and implementation much easier (Crankshaw *et al*, 2001) and subsequent CSSR surveys have made use of this approach.

In the first stage of the sampling process for KMP 2000, all non-residential EAs were excluded. Then a random sample of EAs was drawn with probability of selection being proportional to population size. The EAs were listed in geographical order and by housing type – which resulted in an implicit stratification of the sample by location and housing type. (For more detail on this first stage of the sampling, see Crankshaw *et al*, 2001: 165-170).

In the second stage of the sampling, households were listed and a sampling interval drawn up (on the basis of the number of households and an expected response rate of 80% to ensure that at least 10 households per EA were visited). All dwellings were listed – always starting with the South-West corner. The first dwelling was selected on a random basis, and then subsequent households were selected according to the sampling interval. Supervisors were responsible for checking to see how many households there were in each dwelling or stand – so as to ensure that all households fell within the sampling frame. (For more information on the second stage of the sampling design, see Crankshaw *et al*, 2001: 170-171).

The KMP survey was innovative in several respects – one of them being that the design required *all* adults aged 18 and older to be interviewed in the selected

households. Households were revisited up to three times (sometimes more) to obtain the necessary interviews. However, as discussed below (and shown in Table 2), most, but not necessarily all, individuals in sampled households were actually interviewed.

The result of applying this particular sampling method meant that a self-weighted sample was generated in which each household represented $1/0.00826 = 121$ households in the population. This is 'pweight1' in the KMP2000 data set. A second weight 'pweight2' is also included which adjusts for non-response. It was constructed by adjusting the original pweight1 by the inverse of the response rate in each EA (and then applied to each responding household). Thus dividing pweight1 by pweight2 will give you the household response rate for each EA.

A third weight, 'adultrakingweight' was calculated to deal with non-response at the individual level because not all individuals in selected households could be found or agreed to be interviewed. This was done by post stratifying the data according to known age, gender and race proportions as reflected in the 1996 population census. The raking ratio method of post-stratifying weight adjustment was used to calculate and make adjustments to the pweight2 variable. The trouble with using this weight, however, is that it adjusts only for demographic characteristics, when in fact individual non-response at household level is unlikely to be a function only of such variables, but rather a function also of other factors (such as employment, how much time a person chooses to spend at home rather than socialising elsewhere or looking for work etc). (For more information on the weighting process, see SALDRU, 2003: 10-11; and Crankshaw *et al*, 2001: 171-173).

Overall (i.e. for the entire KMP sample in 2000), there was an 85% response rates for households – which means that 85% of selected households were found and agreed to let the interviewers through the door. For the 41 Khayelitsha EAs, the average response rate was 83%. Table 2 provides information on household response rates for each EA in Khayelitsha in 2000.

According to the original base-line report for the KMP 2000 survey, the overall response rate for individuals in the household was 85% (SALDRU, 2003: 14). The average response for individuals in Khayelitsha (94%) was better. However, this is the response for individuals conditional on the interviewer having been let through the household door in the first place. A more accurate reflection of the actual individual response rate in Khayelitsha is 78% (i.e. the mean individual response rate multiplied by the household response rate). Such overall response rates are provided for each EA in Table 2.

Table 2: Response Rates in Khayelitsha (2000)

<i>Khayelitsha EAs</i>	<i>% living in shacks</i>	<i>Household response rate</i>	<i>Number of respondents</i>	<i>Individual response rate</i>	<i>Overall response rate*</i>
1066108	0%	85%	31	90%	76%
1066116	0%	77%	19	90%	70%
1066143	0%	54%	13	100%	54%
1066144	0%	69%	17	93%	65%
1066156	0%	85%	22	91%	77%
1066165	0%	85%	27	100%	85%
1066185	0%	100%	30	100%	100%
1066194	0%	85%	21	95%	80%
1066220	0%	69%	18	100%	69%
1066233	0%	85%	25	100%	85%
1066246	0%	92%	32	92%	85%
1066269	0%	69%	17	97%	67%
1066287	0%	77%	21	100%	77%
1066294	0%	85%	23	83%	70%
1066303	86%	92%	21	93%	86%
1066325	95%	85%	27	97%	82%
1066347	13%	69%	22	97%	67%
1066364	100%	85%	33	100%	85%
1066371	9%	92%	21	91%	84%
1066375	0%	92%	30	98%	90%
1066485	0%	69%	14	88%	61%
1066679	100%	85%	22	92%	77%
1066687	100%	69%	17	93%	65%
1066714	100%	85%	19	90%	77%
1066716	79%	85%	43	96%	81%
1066722	91%	85%	22	100%	85%
1066740	100%	85%	17	83%	71%
1066742	100%	69%	17	89%	62%
1066764	97%	77%	28	96%	74%
1066795	84%	69%	23	95%	66%
1066797	100%	92%	30	100%	92%
1066800	97%	77%	30	90%	69%
1066825	84%	92%	33	93%	86%
1066847	100%	92%	23	86%	80%
1066858	69%	85%	28	96%	82%
1066864	100%	92%	17	90%	83%
1066894	100%	85%	21	93%	79%
1066910	100%	69%	18	100%	69%
1067044	100%	92%	18	94%	86%
1067055	100%	85%	28	97%	82%
1067086	100%	77%	18	90%	69%
Total	51%	83%	966	94%	78%

* This is calculated as the household response rate multiplied by the individual response rate (i.e. of individuals conditional on the household being found). It assumes that the size of households that refused, were the same as the households that agreed to participate.

The Sample for the 2004 Khayelitsha Survey

In 2004, the Khayelitsha sample of individuals from KMP2000 was revisited. As noted above, the original survey was not designed as a panel and very little identification information was collected in 2000. Surnames were hardly ever collected and address information was often broadly descriptive (e.g. ‘white zinc shack’) rather than specifically identifying. This was because in many informal settlement areas there was no adequate numbering system for dwellings. Fieldworkers in one of the informal settlement areas failed to find an entire EA through a combination of a poor aerial photograph and the construction of new houses in the area. Unsurprisingly, then, there was attrition between the two surveys. Nevertheless, due to the detective skills of the fieldworkers (most of whom live in Khayelitsha and know the area), attrition was very similar to attrition in other long-term panel studies in the developing world (Lee, 2003) – see below. The fieldworkers managed to find most of the households and were able to follow many of those who had moved within Khayelitsha.

Table 3: Reasons for Attrition between 2000 and 2004

<i>Reason Given for Failure to Interview the Individual</i>	<i>N</i>	<i>%</i>
Lived in the enumerator area which could not be found (ea=1066722) owing to a poor initial aerial photograph and construction in the area	20	5.4
Enumerator area found, but household could not be found	109	29.2
Individuals unknown by those household members who could be located	48	12.9
Not available for interview (even after several visits)	10	2.7
Refused	9	2.4
Deceased	35	9.4
Moved within Cape Town (no address given)	32	8.6
Moved outside Cape Town	61	16.4
Moved, location unknown	32	8.6
Incarcerated	1	0.3
On holiday	1	0.3
Wrong person identified and surveyed	15	4.0
<i>Total</i>	<i>373</i>	<i>100.0</i>
Consent forms not signed (3) or missing observation for consent (4)	7	
Interviews conducted	570	
<i>Total (for which we have information) (570+373)</i>	<i>943</i>	
Potential respondents unaccounted for in the re-survey (survey management problems)	23	
<i>Total potential sample</i>	<i>966</i>	

Of the 966 potential Khayelitsha respondents (i.e. the number of respondents in 2000 from Khayelitsha), 373 could not be interviewed. Table 3 outlines the reasons recorded by the fieldworkers for non-response. For the approximately half of potential respondents for which some information could be obtained,

most had moved outside Khayelitsha (and no forwarding address was available) or had died. Three people were interviewed, but the consent forms were not signed. Finally, no information is available at all about a further 23 potential respondents (due to survey management problems in the field).

Using these causes of attrition, different panel data sets may be created with different implications for attrition. For example, if one creates a panel data set of ‘long-term Khayelitsha residents’ – i.e. we leave out of both waves those people who moved or died in the intervening period – then attrition rates are lower than for the full panel. One may find such a panel data set useful for comparing trends over time with other data sets of Khayelitsha residents (such as the data set of people on long-term antiretroviral treatment discussed in Coetzee and Natrass (2004)).

Table 4 calculates attrition rates for the entire (overall) sample and for a more limited sample restricted to those respondents who have lived in Khayelitsha for 4 years. As can be seen from the table, by excluding those who died or moved in the intervening period, attrition drops from 41% to 29%.

Table 4: Attrition in the Overall Sample and for 4-year Khayelitsha Residents

	N
<i>Total potential sample</i>	966
Sample for which we have information (966-24)	942
Deceased or moved out of Khayelitsha	162
<i>Potential Sample of 4 year Khayelitsha residents (966-162)</i>	804
Surveyed in 2004	570
Attrition rate for the entire (overall) sample $((1-(570/966))*100)$	41%
Attrition rate for 4 year Khayelitsha residents $((1-(570/804))*100)$	29.1%

Table 5 shows how the response rate varied by EA for the re-interviewed sample in 2004. It shows that overall, 60% of potential respondents were actually re-interviewed – but that the response rate varied across EAs, and that for two of the EAs, the response rate was 0 (see highlighted in bold). One of these was the missing EA (referred to above) and the other was an EA in an informal area for which the address information on the 2000 survey was too limited to be usable.

Table 5: Response Rates in Khayelitsha (2000 and 2004)

Khayelitsha EAs	2000				Response rate in 2004 (number interviewed as % of interviews in 2000)	
	% living in shacks	Number of respondents in 2000	Individual response rate in 2000	Overall response rate in 2000*	Overall sample	4 Year Khayelitsha residents
1066108	0%	31	90%	76%	73%	75%
1066116	0%	19	90%	70%	59%	83%
1066143	0%	13	100%	54%	50%	67%
1066144	0%	17	93%	65%	82%	93%
1066156	0%	22	91%	77%	64%	64%
1066165	0%	27	100%	85%	70%	83%
1066185	0%	30	100%	100%	63%	86%
1066194	0%	21	95%	80%	50%	56%
1066220	0%	18	100%	69%	65%	79%
1066233	0%	25	100%	85%	60%	79%
1066246	0%	32	92%	85%	65%	91%
1066269	0%	17	97%	67%	53%	82%
1066287	0%	21	100%	77%	70%	78%
1066294	0%	23	83%	70%	70%	88%
1066303	86%	21	93%	86%	70%	78%
1066325	95%	27	97%	82%	69%	86%
1066347	13%	22	97%	67%	82%	86%
1066364	100%	33	100%	85%	66%	81%
1066371	9%	21	91%	84%	68%	91%
1066375	0%	30	98%	90%	67%	80%
1066485	0%	14	88%	61%	71%	83%
1066679	100%	22	92%	77%	68%	88%
1066687	100%	17	93%	65%	63%	91%
1066714	100%	19	90%	77%	68%	81%
1066716	79%	43	96%	81%	83%	87%
1066722	91%	22	100%	85%	0%	0%
1066740	100%	17	83%	71%	18%	21%
1066742	100%	17	89%	62%	29%	36%
1066764	97%	28	96%	74%	54%	75%
1066795	84%	23	95%	66%	46%	48%
1066797	100%	30	100%	92%	83%	100%
1066800	97%	30	90%	69%	50%	64%
1066825	84%	33	93%	86%	73%	89%
1066847	100%	23	86%	80%	61%	70%
1066858	69%	28	96%	82%	83%	100%
1066864	100%	17	90%	83%	0%	0%
1066894	100%	21	93%	79%	43%	45%
1066910	100%	18	100%	69%	50%	69%
1067044	100%	18	94%	86%	67%	75%
1067055	100%	28	97%	82%	18%	36%
1067086	100%	18	90%	69%	67%	92%
Total	51%	966	94%	78%	60%	74%

* This is calculated as the household response rate multiplied by the individual response rate (i.e. of individuals conditional on the household being found). It implicitly assumes that the size of households that refused, were the same as the households that agreed to participate.

To the extent that supervisor error may have led to poorly enumerated addresses and technological error led to the poor quality aerial photograph, the loss of households from these EAs could perhaps plausibly be regarded as random. If so, then researchers may wish to exclude them from their analysis of both waves (which of course will reduce the attrition rate for the sample so created). However, as these two EAs were predominantly shack settlements (91% and 100% of the respondents in those EAs lived in shacks – see highlighted in bold in Table 4), it is probably unwise to declare their exclusion from the panel study as random for all purposes. Mean household income in the two lost EAs was R1,040 – which is statistically significantly lower than that for the rest of the sample (R1,700).

Another issue that arose during the course of the re-interview process was that fieldworkers came across households that had been interviewed in 2000, but where the current residents claimed that one or more of the respondents being sought for re-interview had never existed in the first place. This suggests that either the original field-work data was problematic (field-workers may have made up individuals in order to increase their output of completed questionnaires and this may not have been picked up in the quality control operation) or that there was something problematic about the household in 2004. Researchers may decide to exclude those households (from both data sets) that reported never having heard of one or more of the individuals that were being sought for re-interview.

Attrition between 2000 and 2004

Table 6 lists attrition for men and women in different potential data sets, where ‘four-year sample’ represents the sample of four-year residents (as in Tables 4 and 5) and ‘excluding households which had no knowledge of potential respondents’ refers to the same sample, but excluding those households which reported never having heard of an individual who had supposedly been interviewed in that household in 2000. Table 6 also includes attrition information keeping all EAs (‘All EAs’) and attrition information after excluding the two EAs from which no respondents could be found (‘Found EAs only’).

For the data analysis of attrition in the rest of this paper, we use the overall sample, which has the highest attrition rate and therefore is likely to manifest the greatest attrition bias.

The attrition rates for the entire Khayelitsha sample are comparable to those of the India Additional Rural Incomes Survey (33% attrition), the Bolivia

Integrated Child Development Program panel survey (35% attrition), the Malaysian Family Life Survey (27% attrition), the Kenyan Ideational Change Survey (32% attrition) and the KwaZulu-Natal Income Dynamics Study (35% attrition). Attrition rates in the Khayelitsha study were significantly better than for the Peruvian Living Standards Measurement Survey (45% attrition), but significantly worse for the Cote D'Ivoire Living Standards Measurement Survey (16%), the Indonesia Family Life Survey (5% attrition) and the Thai Nan Rong Projects survey (9%), though in all of these excepting the Cote D'Ivoire Living Standards Measurement Survey, movers were tracked and interviewed (for a survey of attrition in developing countries see Lee 2003: 22-39).

Table 6: Attrition in Different Possible Panel Data Sets

	Full Sample		4 year resident sample	
	All EAs	Found EAs only	All EAs	Found EAs only
Individual, total	41.1%	38.8%	29.5%	26.9%
Individual, women	37.6%	34.7%	25.0%	22.3%
Individual, men	46.1%	44.1%	35.2%	32.9%
Individual Sample Size	966	927	804	776
Household	32.7%	29.0%	24.9%	22.2%
Household Sample Size	434	411	365	359
Individuals in found households	22.0%	22.0%	11.8%	11.8%
Women in found households	19.5%	19.5%	9.6%	9.6%
Men in found households	25.5%	25.5%	14.9%	14.9%
Sample Size	727	727	643	643
	Sample excluding households which had no knowledge of potential respondents		4 year resident sample excluding households which had no knowledge of potential respondents	
Individual, total	34.9%	32.5%	21.2%	18.8%
Individual, women	31.9%	29.0%	18.1%	15.6%
Individual, men	38.9%	37.1%	25.4%	23.2%
Individual Sample Size	794	766	656	637
Household	30.9%	27.1%	22.9%	20.1%
Household Sample Size	369	350	310	299
Individuals in found households	16.5%	16.5%	5.3%	5.3%
Women in found households	14.2%	14.2%	3.8%	3.8%
Men in found households	19.6%	19.6%	7.5%	7.5%
Sample Size	619	619	546	546

In other words, it would seem that attrition in the Khayelitsha revisit survey (in which only those who moved within Khayelitsha were tracked to their new address) compares favourably to attrition in developing country surveys where movers went untracked. Moreover, given the relative paucity of address information that fieldworkers had, one might hope that attrition in this Khayelitsha panel is somewhat more random than it is in other surveys.

Table 7: Selected Characteristics (from KMP 2000 Survey) of Attritor by Type of Attrition)

	<i>Moved away</i>		<i>Lost household</i>		<i>Other attrition</i>		<i>Total attrition</i>		<i>Non-attritors</i>	
	<i>Mean</i>	<i>95% ci</i>	<i>Mean</i>	<i>95% ci</i>	<i>Mean</i>	<i>95% ci</i>	<i>mean</i>	<i>95% ci</i>	<i>mean</i>	<i>95% ci</i>
Monthly household income (R)	2090	1461-2720	2034	1564-2501	2928	2056-3800	2377	1975-2779	3315	2524-4106
Individual income (R)	591	430-755	681	474-887	687	499-876	655	547-762	688	598-779
Household size	4.4	4.0-4.8	3.5	3.1-3.8	4.9	4.4-5.3	4.3	4.0-4.9	5.1	4.9-5.3
Age	30.9	28.9-32.8	34.0	32.2-35.8	34.1	32.0-36.2	33.0	31.9-34.1	34.8	33.7-35.8
Education	9.3	8.8-9.8	8.0	7.4-8.6	8.5	8.0-9.0	8.6	8.3-8.9	8.4	8.2-8.7
% Male	43.6%	34.9%-52.4%	53.5%	44.8%-62.2%	47.9%	39.5%-56.2%	48.4%	43.4%-53.3%	40.3%	36.3%-44.3%
Wage-employed	28.6%	20.6%-36.6%	31.8%	23.6%-40.0%	33.6%	25.7%-41.5%	31.4%	26.8%-36.0%	34.9%	30.9%-38.9%
Casual employed	2.4%	0-5.1%	3.1%	0.1%-6.1%	1.4%	0%-3.4%	2.3%	0.8%-3.8%	2.8%	1.4%-4.2%
Self employed	4.0%	0.5%-7.4%	9.3%	4.2%-14.4%	5.0%	1.4%-8.7%	6.1%	3.7%-8.4%	8.1%	5.8%-10.3%
Unemployed	58.8%	50.0%-67.8%	44.0%	34.8%-53.1%	49.2%	40.2%-58.2%	50.1%	45.9%-55.9%	50.7%	45.5%-55.9%
Lives in a shack	74.6%	66.9%-82.3%	72.9%	65.1%-80.4%	57.9%	49.6%-66.1%	68.1%	63.5%-72.7%	55.5%	51.4%-59.6%
N	126		129		140		395		570	

Table 8 presents descriptive statistics for attritors and non-attritors including t-tests of differences between the mean values for selected variables. It shows that for both men and women, attritors are more likely to come from smaller households and live in shacks – but that otherwise, different patterns are evident for men and women. Younger men are more likely to attrit (age is not a significant difference for women), and women with lower individual incomes and living in lower income households are more likely to attrit (income is not significant for men). Unemployed females are also more likely to attrit. Households which attrit (i.e. those households which could not be found at all), tend to be poorer and to be found in shack settlements.

Table 8: Selected Characteristics of Attritor (from KMP 2000 Survey)

Statistics	Monthly household income	Individual income	Household size	Age	Edu-cation	Wage-employed	Causal-employed	Self-employed	Unem-ployed	Lives in a shack
Male, non-attritors										
Mean	R1,766	R845	4.96	35.9	7.8	0.475	0.036	0.054	0.358	0.565
Standard deviation	R1,476	R1,095	2.40	13.0	3.5	0.501	0.186	0.226	0.481	0.497
Male Attritors										
Mean	R1,619	R886	4.14	33.2	8.0	0.417	0.037	0.054	0.422	0.691
Standard deviation	R1,541	R1,311	2.31	11.2	3.6	0.494	0.190	0.000	0.495	0.463
<i>Difference in means for male non-attritors and male attritors</i>										
Difference	R148	-R41	0.82***	2.7*	-0.2	0.058	-0.001	0	-0.06	-0.126**
t-test	0.998	-0.344	3.557	2.303	-0.663	1.181	-0.083	0.01	-1.31	-2.686
Female non-attritors										
Mean	R1,848	R1,813	5.25	34.0	8.8	0.29	0.0240	0.123	0.464	0.548
Standard Deviation	R1,690	R8,103	2.43	11.9	3.2	0.46	0.1531	0.329	0.450	0.498
Female Attritors										
Mean	R1,329	R583	4.35	32.9	8.4	0.25	0.0099	0.095	0.552	0.672
Standard deviation	R1,230	R1,098	2.46	11.5	3.9	0.44	0.0995	0.293	0.500	0.471
<i>Difference in means for female non-attritors and female attritors</i>										
Difference	R520***	R144**	0.90***	1.1	0.4	0.04	0.014	0.028	-0.09**	-0.123***
t-test	4.135	1.804	4.144	1.058	1.325	1.00	1.28	1.03	-1.979	-2.891
Comparison of Attritors and Non-Attritors										
Statistics	Monthly household income (non attritors)	Monthly household income (attritors)	Household size (non-attritors)	Household size (attritors)	Live in a shack (non attritors)		Live in a shack (attritors)			
Mean	R1,664	R1,364	4.43	3.41	0.564		0.665			
Standard deviation	R1,522	R1,458	2.17	1.97	0.497		0.473			
Difference	R300**		1.02***		-0.100**					
t-test	2.005		4.9		-2.06					

The t-test is a two-sample t-test with unequal variances. * indicates significance at the 10% level and ** at the 5% level. *** at the 1% level. The labour force categories are based on 'lmstatus2' as described in Natrass (2002).

There are two ways of exploring this proposition. The first is to see if there are systematic differences between the observable characteristics of different types of attritors (Table 7), and the second is to compare the characteristics of attritors in general with non attritors (Table 8). Table 7 provides mean estimates (and a 95% confidence interval around those mean estimates) for key socio-economic characteristics by type of attritor: those who we know moved away; those who lived in lost households and those who attrited for other reasons. It shows that there were no statistically significant differences in mean age, the proportion who were men, the mean percentage living in shacks, mean household income or mean individual income between the different types of attritors (because the 95% confidence interval overlaps in all cases). There were also no statistically

significant differences in the percentage of people in different labour-market states. The only significant differences were that those who lived in lost households were more likely to have lived in smaller households than other types of attritors, and that mean years of education were lower for living in lost households than those who moved away. In other words, there are relatively few observable differences between the different kinds of attritors. It thus makes sense to analyse them as a single group.

To check for the statistical significance of these differences in a multivariate analysis, we can run probits on the probability of attriting. Model 1 in Table 9, which uses the entire sample, shows that males, shack-dwellers, younger people and those living in small and low-income households have a significantly greater probability of attriting than other respondents. The table reports marginal effects – so for example, in model 1, we can conclude that being female reduces the probability of attriting by 7.6 percentage points (controlling for all other variables held constant at their mean values). Likewise, the probability of attriting is reduced by 3.7 percentage points if household size increases by one member. Note that household income is significant only at the 10% level and the size effect is very small (an increase in household income of R100 only reduces the probability of attriting by 0.2 percentage points).

Models 2 and 3 run the regression conditional on gender, and models 4 and 5 run the regression conditional on whether the respondent lives in a shack or a house. They show that the impact of household income is no longer significant, whereas the effect of household size remains important in all 4 models. Model 6 runs the regression selecting only male respondents living in shacks. Apart from household size, age is the only (marginally significant) determinant of attrition. For women, however (model 7), those living in smaller and poorer households are more likely to attrit. However in all cases where the independent variables are statistically significant, the size impact (on the probability of attrition) is relatively small.

We may also be concerned about the effect of household size and whether the household lives in a shack or not on household attrition. The probit regression below shows that small households are more likely to attrit – as are households living in shacks – but that household income is not a significant predictor of household attrition. NB: This regression is run at the household level, with the dependent variable taking a value of 0 if the household was found, and 1 if it was not.

Table 9: Probit regressions on Attrition

Dependent Variable: Attritor	1	2	3	4	5	6	7
	Entire sample	Women only	Men only	Live in a shack	Live in a brick house	Men living in a shack	Women living in a shack
Age	**				*	*	
dF/dx	-0.0034	-0.0027	-0.0040	-0.0029	-0.0043	-0.007	0.0023
z	-2.07	-1.19	-1.66	-1.27	-1.85	-2.23	0.70
P> z	(0.038)	(0.235)	(0.097)	(0.204)	(0.064)	(0.026)	(0.484)
Female	**			*			
dF/dx	-0.0757			-0.0850	-0.0682		
z	-2.24			-1.93	-1.34		
P> z	(0.025)			(0.054)	(0.180)		
Education							
dF/dx	-0.0053	-0.0101	0.0019	-0.0039	-0.0101	-0.0054	0.0013
z	-0.96	-1.39	0.23	-0.56	-1.12	-0.50	0.14
P> z	0.337	0.165	0.820	0.576	0.262	0.614	0.892
Total household income	*	**					**
dF/dx	-	-	-	-	-0.00001	-0.00000	-0.00006
z	0.00002	0.00003	0.00000	0.00003	-0.70	-0.25	-2.18
P> z	-1.68 0.093	-2.03 0.020	-0.17 0.865	-1.59 0.112	0.482	0.806	0.029
Working							
dF/dx	-0.048	-0.0787	0.049	-0.0865	0.0044	-0.0108	-0.1715
z	-0.76	-0.98	0.05	-1.00	0.05	-0.09	-1.42
P> z	0.447	0.327	0.961	0.319	0.960	0.932	0.157
Unem- ployed							
dF/dx	0.0059	-0.0077	0.0506	0.0268	-0.0369	0.0699	-0.0127
z	0.09	-0.10	0.49	0.31	-0.41	0.55	-0.11
P> z	0.926	0.923	0.625	0.755	0.684	0.581	0.915
Living in a shack	***	**	**				
dF/dx	0.1147	0.1058	0.1254				
z	3.31	2.32	2.34				
P> z	0.001	0.020	0.019				
Household size	***	***	***	***	***	***	***
dF/dx	-0.0367	-0.0373	-0.0360	-0.0349	-0.0392	-0.0380	-0.0319
z	-5.21	-4.06	-3.32	-4.08	-3.20	-2.90	-2.80
P> z	0.000	0.000	0.001	0.000	0.001	0.004	0.005
Number of observations	929	528	401	562	367	250	312
Pseudo R-squared	0.0506	0.0577	0.0419	0.0459	0.0374	0.0506	0.0537

* indicates significance at the 10% level and ** at the 5% level. *** at the 1% level .

Probit estimates	Number of obs	=	401
	LR chi2(3)	=	27.88
	Prob > chi2	=	0.0000
Log likelihood = -261.01283	Pseudo R2	=	0.0507

h/hold attritor	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
h/hold size	-.14279	.0318613	-4.48	0.000	-.2052369 - .080343
h/hold income	-.0000357	.0000415	-0.86	0.390	-.000117 .0000457
shack/house	.2403315	.1341033	1.79	0.073	-.0225062 .5031692
constant	.3117429	.1701663	1.83	0.067	-.0217769 .6452626

Given that household size is a strong predictor for household attrition, this suggests that either smaller households are more mobile or systematically different even conditional on age, education, etc., or our fieldworkers had more difficulty tracking people from smaller households (as there would have been fewer individual points of reference to help with the search for respondents). As is clear from Table 9, household size is also a strong predictor for individual attrition. Table 7 showed that this was particularly a problem for those who attrited because the entire household could not be found. Unsurprisingly, then, Table 10 shows that conditional on the household being found, household size has no significant effect on individual attrition probabilities.

One might expect attrition to be higher amongst those who are recent migrants to Cape Town, and/or had moved recently to the dwelling they were living in at the time of the 2000 KMP survey. Model 5 in Table 10 includes two further dummy variables: ‘recent migrant’ (those who had moved to Cape Town since 1998) and ‘recent resident’ (those who had moved to the household since 1998). It shows that controlling for other factors, recent migration to Cape Town proved to be insignificant, but that moving to the dwelling since 1998 was highly significant (and the impact was sizable). The regression implies that controlling for all other explanatory variables (held constant at their mean values), someone who had joined the household since 1998 had a 16 percentage point higher probability of attriting than other respondents.

In short, the probit regression models reported thus far suggest that household size, gender and housing type are significant determinants of attrition, but their impact on the probability of attrition is relatively small. The sample is thus not strongly biased as far as these observables are concerned. The same cannot be said for those who had moved recently to the household – as their chances of attrition are high. If one was interested in core household members rather than all individuals – some of whom would have joined the household as a short-term accommodation strategy with the intention of moving on as soon as they found a job or suitable alternative accommodation – then this form of attrition bias may not be so important. However, if one was interested in tracking individual transitions, then this form of attrition bias needs to be borne in mind.

Table 10: Probit regressions on Attrition

Dependent Variable: Attritor	1	2	3	4	5
	Entire sample	Found households only	Women in found households only	Men in found households only	Entire sample
Age	**			**	
dF/dx	-0.0034	-0.00229	0.0004	-0.0055	-0.0018
z	-2.07	-1.44	0.02	-2.13	-1.05
P> z	(0.038)	(0.149)	0.982	0.033	(0.295)
Female	**	**			**
dF/dx	-0.0757	-0.07006			-0.0784
z	-2.24	-2.15			-2.31
P> z	(0.025)	(0.031)			(0.021)
Education					
dF/dx	-0.0053	-0.0009	-0.0021	-0.0011	-0.0060
z	-0.96	-0.17	-0.29	-0.12	-1.08
P> z	0.337	0.337	0.771	0.906	0.280
Total household income	*				*
dF/dx	-0.00002*	-0.00000	-0.00002	0.00002	-0.00002
z	-1.68	-0.44	-1.14	0.90	-1.84
P> z	0.093	0.662	0.252	0.370	0.065
Working					
dF/dx	-0.048	-0.048	-0.383	-0.0571	-0.0095
z	-0.76	-0.82	-0.54	-0.57	-0.15
P> z	0.447	0.412	0.592	0.566	0.883
Unemployed					
dF/dx	0.0059	-0.0477	0.0084	0.0016	0.0311
z	0.09	-0.03	0.11	0.02	0.49
P> z	0.926	0.974	0.908	0.987	0.626
Living in a shack	***				***
dF/dx	0.1147	0.0537	0.0712	0.0281	0.1132
z	3.31	1.64	1.72	0.53	3.25
P> z	0.001	0.101	0.085	0.597	0.001
Household size	***				***
dF/dx	-0.0367	0.00926	0.0063	0.0134	-0.0337
z	-5.21	1.45	0.79	1.26	-4.76
P> z	0.000	0.147	0.427	0.208	0.000
Recent resident					***
dF/dx					0.1602
z					2.68
P> z					0.007
Recent migrant					
dF/dx					0.0354
z					0.51
P> z					0.607
Number of observations	929	702	409	293	929
Pseudo R-squared	0.0506	0.0238	0.0243	0.0351	0.0652

* indicates significance at the 10% level and ** at the 5% level. *** at the 1% level .

The extent to which the sample bias matters, is of course dependent on the research question being posed. As Cichello observes, the existing literature on

the problem of panel attrition generally concludes that despite mean differences in the characteristics of attritors, structural relationships are not necessarily affected (despite the non random nature of attrition) – but that this should be tested by researchers on a case-by-case basis as to whether the relationships matter because no general conclusions can be made – even within the same data set (Cichello, 2001: 16; see also Alderman *et al*, 2001). For example, if the main objective is to conduct labour-market analysis – and if factors such as household size and housing type are incidental to it – then the bias reported here for the Khayelitsha survey is probably incidental. This is explored below.

Some Exploratory Labour-Market Analysis

This final section of the paper provides some exploratory labour-market analysis to see whether attrition bias matters. In this regard, we follow Falaris (2003) in trying to estimate classical equations to tell if coefficient estimates appear biased by using the sample of non-attritors versus the overall sample. Two obvious equations are a Mincerian earnings equation and a probit on whether a person has waged employment (as reported in Table 10).

In none of these simple analyses was the slope or intercept coefficients of non-attritors individually or jointly significantly different from the sample at large (shown in Wald and Chi2 tests reported at bottom of Table 11). In other words, for this particular analysis, the coefficients generated using a restricted sample of non attritors do not differ significantly from those generated by the entire sample.

Now let us examine labour force participation. Table 12 summarises the results for labour force participation using the full sample, the sample of attritors only, and the sample of non-attritors. It shows that the distribution of labour force categories is close to that for the full sample as a whole and that there is no significant difference in the distributions within different samples. In other words, at least as far as *prior* labour force participation is concerned, attrition did not bias the sample to any significant extent.

Table 11: Earnings Function and Probability of being in Wage Employment

	Dependent variable: log monthly wage	Dependent variable: log monthly wage	Dependent variable: log monthly wage	Dependent variable: probability of being in wage employment	Dependent variable: probability of being in wage employment	Dependent variable: probability of being in wage employment
	Men and Women	Women	Men	Men and Women	Women	Men
Education	***	***	**	***	***	***
coefficient	0.066	0.0941	0.0396	0.0646	0.1068	0.0136
t(z)-statistic	4.40	3.64	2.21	3.31	3.90	4.98
Age			**	***	***	***
coefficient	0.0232	-0.368	0.086	0.1770	0.1378	0.2339
t-statistic	0.80	-0.84	2.30	6.03	3.58	4.98
Age squared			**		**	
coefficient	-0.002	0.001	-0.001	-0.0003	-0.0012	-0.0026
t-statistic	-0.55	1.23	-2.45	0.38	2.49	0.44
Female	***			***		
coefficient	-0.4521			-0.4800		
t-statistic	-5.88			5.32		
Education*attrit						
coefficient	0.0135	0.0254	0.0239	0.0110	-0.0030	0.0378
t-statistic	0.59	0.21	1.31	0.38	-0.07	0.92
Age*attrit						
coefficient	-0.0150	-0.0356	-0.0441	-0.0022	0.0779	-0.0877
t-statistic	-0.35	-0.33	-0.89	-0.05	1.06	-1.34
Age squared*attrit						
coefficient	0.0002	0.0004	0.0007	-0.0002	-0.0012	-0.0012
t-statistic	0.45	0.28	1.31	-0.45	-1.38	-1.34
Attritor						
coefficient	0.0761	0.4042	0.3777	0.2532	-0.9701	1.395
t-statistic	0.09	0.21	0.36	0.27	-0.67	1.05
Adj/Pseudo R squared	0.1581	0.1491	0.1270	0.1101	0.1149	0.0908
N	291	132	159	950	538	412
Wald/Chi2 test	F(4,282)=0.16 Prob>F = 0.958	F(4,124)=0.23 Prob>F = 0.921	F(4,151)=1.5 Prob>F = 0.206	Chi2(4)=9.31 Prob>Chi2 = 0.054	Chi2(4)=4.59 Prob>Chi2 = 0.332	Chi2(4)=6.48 Prob>Chi2 = 0.145
Wald / Chi2 tests that the coefficients on attritor, age*attritor, age squared*attritor and education*attritor = 0						

Table 12: Labour Force Participation in 2000

	Full sample in 2000	Non-attritors	Attritors
<i>Basic Labour Force Categories</i>			
Employed	46.6%	49.0%	43.0%
Active job seekers	19.8%	18.5%	21.7%
Those wanting work but not seeking it	25.2%	23.7%	27.3%
Non-labour force participants	8.5%	8.8%	8.0%
	100%	100%	100%
N	945	557	388
	Pearson chi2 (3) = 4.2705 Pr = 0.234		
<i>Expanded Labour Force Categories (Nattrass, 2002)</i>			
Wage employed	35.2%	36.6%	33.3%
Self employed	8.7%	9.5%	7.5%
Casually employed	2.7%	2.9%	2.3%
Searching unemployed	19.8%	18.5%	21.7%
Network searching unemployed	6.8%	7.4%	5.9%
Marginalised unemployed	18.4%	16.3%	21.4%
Non-labour force participants	8.5%	8.8%	8.0%
	100%	100%	100%
N	945	557	388
	Pearson chi2 (6) = 7.2972 Pr = 0.294		

An interesting question that can be explored by this panel data set is how labour force status may have changed over time for the respondents. The simple transition analysis reported below indicates that there was a fair amount of stability for the employed, but a lot less for the other categories. More specifically, 61% of those who were employed in 2000 were also in employment in 2004, 15% had dropped out of the labour force altogether, and the remainder had become unemployed (mostly of the non-active job seeking kind). Of those who had been searching actively for jobs in 2000, 37% became employed. Interestingly, of those who had reported wanting to work in 2000 – but not actively seeking it – 32% actually found work. Even a sizable proportion (20%) of non labour force participants in 2000 reported being employed in 2004.

Labour Market Status 2000	Labour Market Status 2004				Total
	Employed	Active job search	Passive job search	Non labour force	
Employed	61.2	4.3	19.8	14.8	100.0
Active job search	36.9	15.5	37.9	9.7	100.0
Passive job search	31.8	16.7	34.9	16.7	100.0
Non labour force	19.6	13.7	23.5	43.1	100.0
Total	46.1	10.1	27.0	16.8	100.0

Such transition analysis, however, is beyond the scope of the paper and has been included merely as an appetizer for the kind of work the Khayelitsha panel data set is capable of facilitating.

Conclusion

To what extent did attrition between the 2000 and 2004 waves of the Khayelitsha panel survey bias the sample? The short answer is that attrition bias is evident (but for the most part not particularly strong) and is likely to be a problem only for particular research questions (e.g. those affected by higher attrition rates among new household members). For general labour-market enquiries, the attrition bias does not seem significant – although researchers should remain alert to the possibility that attrition bias may be influencing their results.

References

- Alderman, H., Behrman, J., Kohler, H., Maluccio, J., and Cotts-Watkins, S. 2001. "Attrition in Longitudinal Household Survey Data: Some Tests for Three Developing Country Samples", in *Demographic Research*, 5(4). Available on www.demographic-research.org
- Cichello, P. 2001. "Did African Workers in Post-Apartheid KwaZulu-Natal Really Get Ahead? Robustness Checks in the Light of Panel Attrition?", draft paper, January 2001.
- Coetzee, C. and N. Nattrass. 2004. "Living on AIDS Treatment: A Socio-Economic Profile of Africans Receiving Antiretroviral Therapy in Khayelitsha", *CSSR Working Paper* no. 71, Cape Town, Centre for Social Science Research, University of Cape Town. Available on www.cssr.uct.ac.za.
- Crankshaw, O., Welch, M. and S. Butcher. 2001. "GIS Technology and Survey Sampling Methods: The Khayelitsha/Mitchell's Plain 2000 Survey" in *Social Dynamics*, 27(2): 156-174.
- Falaris, Evangelos M. 2003. "The Effect of Survey Attrition in Longitudinal Surveys: Evidence from Peru, Cote d'Ivoire, and Vietnam. *Journal of Development Economics* 70, 133-157.
- Lee, Una. 2003. "Panel Attrition in Survey Data: A Literature Review." *CSSR Working Paper* No. 41, Cape Town, Centre for Social Science Research, University of Cape Town. Available on www.cssr.uct.ac.za.
- Nattrass, N. 2002. "Unemployment, employment and Labour Force Participation in Khayelitsha/Mitchells Plain", *CSSR Working Paper* No. 12, Cape Town, Centre for Social Science Research, University of Cape Town. Available on www.cssr.uct.ac.za.
- SALDRU. 2003. *Khayelitsha/Mitchell's Plain Survey 2000: Survey Report and Baseline Information*, SALDRU, Centre for Social Science Research, University of Cape Town, March

- Schöer, V. 2004. "Job Search Strategies and Social Networks: Evidence from the Khayelitsha/Mitchell's Plain Survey", Master's Thesis, University of Cape Town.
- Seekings, J. 2002. "Unemployment and Distributive Justice in South Africa: Some Inconclusive Evidence from Cape Town, *CSSR Working Paper* no. 24, Cape Town, Centre for Social Science Research, University of Cape Town. Available on www.cssr.uct.ac.za.
- Skordis, J. and M. Welch. 2002. "Comparing Alternative Measures of Household Income: Evidence from the Khayelitsha/Mitchell's Plain Survey," *CSSR Working Paper* No. 25, Cape Town, Centre for Social Science Research, University of Cape Town. Available on www.cssr.uct.ac.za.
- Walker, R. 2003. "Reservation Wages: Measurement and Determinants: Evidence from the Khayelitsha/Mitchell's Plain Survey, *CSSR Working Paper*, no. 38, Cape Town, Centre for Social Science Research, University of Cape Town. Available on www.cssr.uct.ac.za

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The **AIDS and Society Research Unit** (ASRU) supports innovative research into the social dimensions of AIDS in South Africa. Special emphasis is placed on exploring the interface between qualitative and quantitative research. By forging creative links between academic research and outreach activities, we hope to improve our understanding of the relationship between AIDS and society and to make a difference to those living with AIDS. Focus areas include: AIDS-stigma, sexual relationships in the age of AIDS, the social and economic factors influencing disclosure (of HIV-status to others), the interface between traditional medicine and biomedicine, and the impact of providing antiretroviral treatment on individuals and households.

The **Data First Resource Unit** ('Data First') provides training and resources for research. Its main functions are: 1) to provide access to digital data resources and specialised published material; 2) to facilitate the collection, exchange and use of data sets on a collaborative basis; 3) to provide basic and advanced training in data analysis; 4) the ongoing development of a web site to disseminate data and research output.

The **Democracy in Africa Research Unit** (DARU) supports students and scholars who conduct systematic research in the following three areas: 1) public opinion and political culture in Africa and its role in democratisation and consolidation; 2) elections and voting in Africa; and 3) the impact of the HIV/AIDS pandemic on democratisation in Southern Africa. DARU has developed close working relationships with projects such as the Afrobarometer (a cross national survey of public opinion in fifteen African countries), the Comparative National Elections Project, and the Health Economics and AIDS Research Unit at the University of Natal.

The **Social Surveys Unit** (SSU) promotes critical analysis of the methodology, ethics and results of South African social science research. Our core activities include the overlapping Cape Area Study and Cape Area Panel Study. The Cape Area Study comprises a series of surveys of social, economic and political aspects of life in Cape Town. The Cape Area Panel Study is an ongoing study of 4800 young adults in Cape Town as they move from school into the worlds of work, unemployment, adulthood and parenthood.

The **Southern Africa Labour and Development Research Unit** (SALDRU) was established in 1975 as part of the School of Economics and joined the CSSR in 2002. In line with its historical contribution, SALDRU's researchers continue to conduct research detailing changing patterns of well-being in South Africa and assessing the impact of government policy on the poor. Current research work falls into the following research themes: post-apartheid poverty; employment and migration dynamics; family support structures in an era of rapid social change; the financial strategies of the poor; public works and public infrastructure programmes; common property resources and the poor.
