

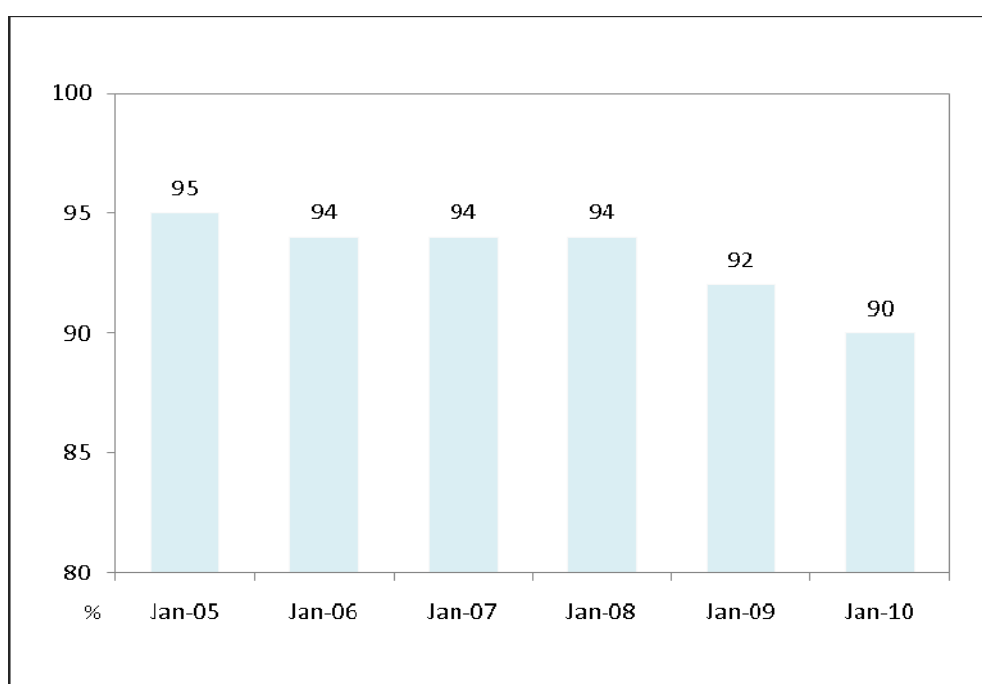
Profiling the 'mobile phone only' population. Results from a dual-frame telephone survey using a landline and mobile phone sample frame.

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Introduction

One of the emerging issues facing telephone survey researchers in Australia is the increasing proportion of households without a landline telephone connection. Recent data (November, 2010) from the Australian Communications Media Authority shows that the proportion of households without a landline telephone connection has doubled from 5% to 10% in the last 5 years.¹

Figure 1: Household consumers with a landline telephone connection, 2005 to 2010.



Source: Australian Communications and Media Authority

While the ACMA data shows that 90% of households still have a landline telephone connection these lines are not always available for receiving incoming calls (and as such not always accessible for telephone survey research). Many landlines are increasingly being used to provide home broadband internet connectivity, with voice calls being made or received via a mobile phone or VoIP service.

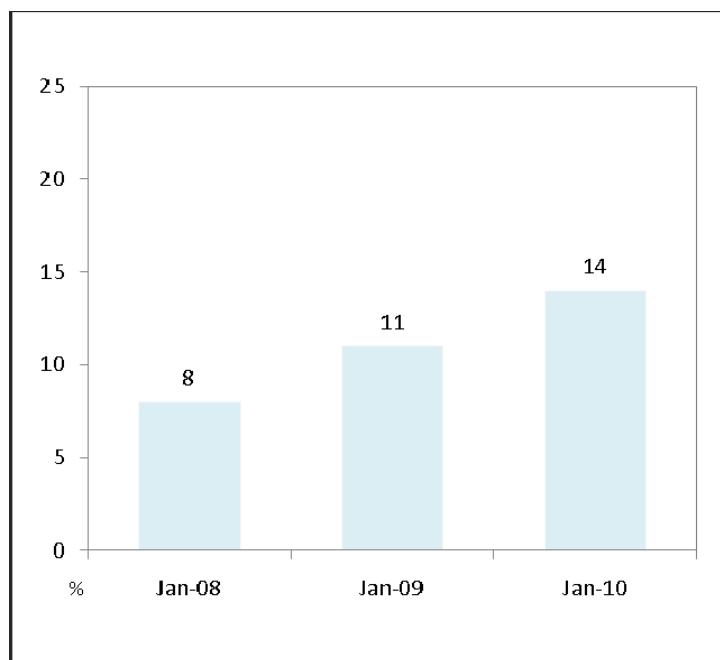
This means that the proportion of households contactable via traditional telephone interviewing methods is somewhat less than 90%, and declining.

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¹ Australian Communications and Media Authority. 2009-10 Communications report series: Report 2 – Take-up and use of voice services by Australian consumers, November, 2010

This same ACMA report provides another way of looking at this issue by showing the change in the proportion of mobile phone users who do not have a landline telephone connection – the so-called 'mobile phone only' population. Figure 2 shows that the proportion of mobile phone users who do not have a landline telephone connection has increased from 8% in January 2008 to 14% at January 2010. Other data in the ACMA report suggests that this trend is likely to continue with 'one in three 18 to 24 year olds opting not to connect a landline telephone when they move out of the parental home.'

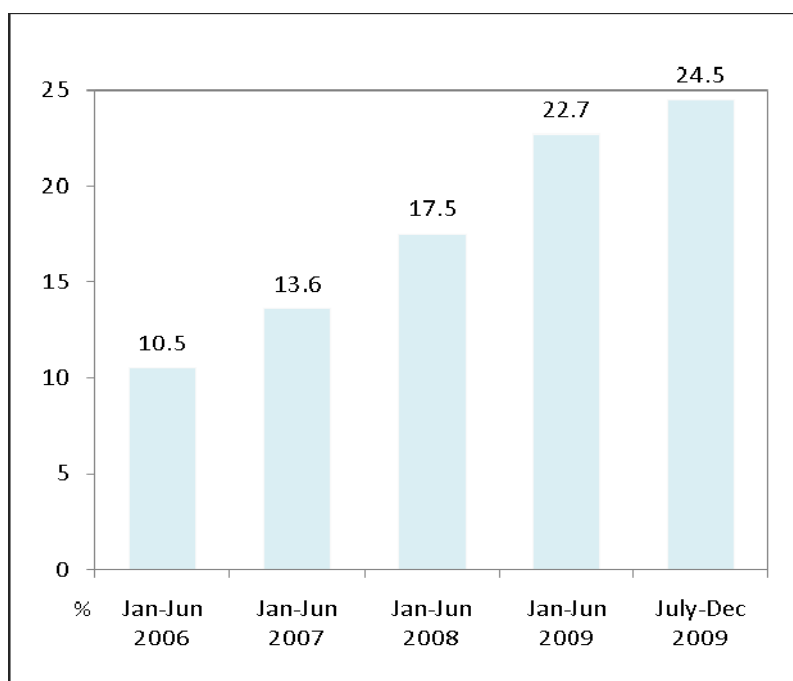
Figure 2: Mobile phone users without a landline. 2008 to 2010.



Source: Australian Communications and Media Authority

Data from the U.S. National Health Interview Survey, July to December 2009, provides an international context for this phenomenon and perhaps a pointer to the future in Australia. This data shows that 24.5% of US households are mobile phone only² with the proportion of mobile phone only households more than doubling in the last four years.

Figure 3: Mobile phone only households in the USA, 2006 to 2009.



Source: Center for Disease Control

The non-coverage of mobile phone only households via traditional landline sample frames is a source of potential bias for telephone surveys and, as such, warrants further investigation. Given this situation, the Social Research Centre and the Institute for Social Science Research (ISSR) have conducted what the authors believe is the first ever Australian 'dual-frame' telephone survey using a randomly generated list of landline telephone numbers and an additional sample comprising a randomly generated list of mobile phone numbers.

The objectives of this study were to:

- pioneer the conduct of a dual-frame telephone survey using landline and mobile phone numbers
- better understand the issues involved in conducting telephone surveys using a dual-frame sampling methodology
- profile the 'mobile phone only' population, that is, those persons who live in households without a landline telephone connection, and
- examine the impact that the systematic exclusion of 'mobile phone only' persons from traditional landline telephone surveys has on the resultant population estimates.

² Blumberg SJ and Luke JV. Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, (Center for Disease Control) July – December, 2009.

As part of addressing these objectives this paper compares the landline and mobile phone samples on a range of socio-economic characteristics and in relation to issues such as:

- general health status
- tobacco and alcohol consumption
- use of illegal drugs
- crime victimisation and experiences of discrimination
- social support networks
- perceptions of safety
- financial hardship, and
- attitudes to contemporary issues such as immigration and the environment.

About the survey

The questions used in this survey were sourced from reputable, publicly available questionnaires and scales. A small pilot test (n=30) was undertaken, not so much with a view to revising the questionnaire items but more so to inform the operational aspects of undertaking a dual-frame survey.

The in-scope sample for the survey was Australian residents aged 18 years and over. The sampling frames used for the survey were a landline RDD sample and a mobile phone RDD sample provided by *Sampleworx*.³ A total of 700 interviews were undertaken, 400 interviews from the landline sample and 300 from the mobile phone sample. Interviewing was conducted over the period 6 to 20 September, 2010. The person selected for interview for the landline survey was the person aged 18 years and over who had the most recent birthday. For the mobile phone survey the interviewee was the phone answerer, if aged 18 years and over. The average interview length was 10.3 minutes for the landline sample and 10.8 minutes for the mobile sample.

The confirmed in-scope contact rates for each sample⁴ were 52.5% for the landline sample and 35.0% for the mobile phone sample. The difference in the in-scope contact rates is mainly attributable to there being more unresolved call outcomes for the mobile phone sample compared to the landline sample, with 29% of mobile phone sample records having a final outcome of 'voicemail' compared with 7% of calls to the landline sample. The mobile phone sample also encountered a higher proportion of sample members aged less than 18 years. Once contact was established with an in-scope household or person the respective response rates (interviews/ in-scope contacts) were 46.3% for the landline sample and 52.0% for the mobile phone sample.

³ *Sampleworx* is company that provides sample frames to the market and social research industry.

⁴ In-scope contacts are defined as (Interviews/interviews+unresolved appointments+household refusals+respondent refusals+Mid-survey terminations+Not safe to take call)

A summary of call outcomes for both samples is presented below.

Table 1: Call outcome summary, Landline and Mobile phone samples.

	Landline	Mobile
Fieldwork start	6-Sept-10	6-Sep-10
Fieldwork finish	20-Sept-10	20-Sept-10
Fieldwork period	15 days	15 days
Total interviews achieved	400	300
In-scope contact rate (%)	52.5	35.0
Response rate (%)	46.3	52.0
Overall interview length (mins)	10.3	10.8
Lapsed time (minutes)	8.4	13.8
Total sample records released	1,648	1,653
Sample records per interview	4.1	5.5
Total calls made	4,913	7,677
Calls per completed interview	12.3	25.6

RDD sampling procedure

The Australian Communications and Media Authority (ACMA) provide a list of phone number ranges that are allocated to telecommunications companies which in turn are allocated to their individual customers. *Sampleworx* randomly generate numbers that fall within these ranges. For example, if the range defined by ACMA is 02 9894 0000 to 02 9894 9999, then a randomly generated suffix is appended to 02 9894 to make a complete number. Using proprietary software each number is then tested with the exchange to verify whether the number is currently a valid or in-valid number. Using this method *Sampleworx* have developed a washed pool of 7 million landline RDD numbers which is updated every 6 months. Each number generated is assigned a "best estimate" postcode, based on exchange district and charge zone, which can be used for the *a priori* allocation of numbers to geographic strata.

The process for the generation of RDD mobile phone numbers is very similar. *Sampleworx* uses the ACMA list of mobile phone number ranges that are allocated to telecommunications companies and randomly generates a suffix to make a complete number and then tests each number to identify valid and in-valid numbers. Mobile phone numbers are not assigned to a sample pool but generated on an order by order basis. The mobile numbers are not geographically profiled.

Respondent profile

Given that one of the main objectives of this study is to better understand the impact that the exclusion of 'mobile phone only' persons has on the estimates produced from surveys using a traditional landline RDD sampling frame, the differences in the profiles of landline (LL) respondents compared with the mobile phone only (MPO) respondents is of interest. The major differences (as evident in Table 2 columns a and f are summarised below:

- Gender – Males (LL – 39.8%, MPO – 57.8%)
- Age – Persons aged 18 to 34 years (LL - 12.0%, MPO – 63.9%)
- Region – Capital city residents (LL – 55.0%, MPO - 62.7%)
- Indigenous status – Aboriginal and Torres Strait Islander (LL - 1.0%, MPO – 8.4%)
- Birthplace – Overseas born (LL – 25.2%, MPO – 48.2%)
- Time in neighbourhood – Less than 5 years (LL – 25.5%, MPO – 81.9%)
- Home ownership - Living in a rental property (LL – 13.0%, MPO – 72.3%)
- Living arrangements – Living in a group household (LL – 3.8%, MPO – 30.1%)
- Enrolled in tertiary studies - (LL - 7.0%, MPO 31.1%)
- Highest level of educational attainment - Bachelors degree or higher (LL – 24.8%, MPO – 36.1%), and
- Employment status – Employed (LL - 53.2%, MPO - 67.5%)

Table 2: Sample profile, unweighted.

Selected characteristics	Landline Sample			Mobile Sample		
	Total (LL) (n=400) %	Landline & Mobile (n=342) %	LLO (n=58) %	Total (n=300) %	Mob & LL (n=215) %	MPO (n=83) %
	a	b	c	d	e	f
Gender						
Male	39.8	39.5	41.4	50.7 ^a	47.9	57.8 ^a
Female	60.2	60.5	58.6	49.3 ^a	52.1	42.2 ^a
Age group (years)						
18-34	12.0	13.2	5.2	46.3 ^a	39.5 ^b	63.9 ^a
35-44	18.2	19.3	12.1	15.3	14.9	16.9
45-54	18.5	19.3	13.8	19.3	21.9	12.0
55+	51.2	48.2	69.0	19.0 ^a	23.7 ^b	7.2 ^a
Region						
Capital city	55.0	56.1	48.3	67.7 ^a	69.8 ^b	62.7 ^a
Other	45.0	43.9	51.7	32.3 ^a	30.2 ^b	37.3 ^a
Indigenous status						
A&TSI	1.0	1.2	-	3.3 ^a	1.4	8.4 ^a
Non A&TSI	99.0	98.8	100.0	96.7 ^a	98.6	91.6 ^a
Birthplace						
Australia	74.8	75.4	70.7	60.3 ^a	63.3 ^b	51.8 ^a
Other	25.2	24.6	29.3	39.7 ^a	36.7 ^b	48.2 ^a
Time in neighbourhood						
5 years or less	25.5	26.9	17.2	58.3 ^a	49.3 ^b	81.9 ^a
More than 5 years	74.5	73.1	82.8	41.7 ^a	50.7 ^b	18.1 ^a
Home ownership						
Rental	13.0	13.7	8.6	48.0 ^a	38.6 ^b	72.3 ^a
Other	87.0	86.3	91.4	52.0 ^a	61.4 ^b	27.7 ^a
Living arrangements						
Group household	3.8	3.8	3.4	21.0 ^a	17.2 ^b	30.1 ^a
Post secondary student						
Yes	7.0	7.9	1.7	24.3 ^a	21.4 ^b	31.3 ^a
No	92.5	91.8	96.6	75.3 ^a	78.1 ^b	68.7 ^a
Educational attainment						
Bachelors Degree or higher	24.8	26.0	17.2	31.0	29.3	36.1
Other	75.2	74.0	82.8	69.0	70.7	63.9
Employment status						
Employed	53.2	57.3	29.3	65.0 ^a	64.7 ^b	67.5 ^a
Other	46.8	42.7	70.7	35.0 ^a	35.3	32.5 ^a

Statistically significant at the 95% confidence interval. Significance testing carried out for columns a/d, a/f, b/e. For example, the proportion of respondents in the MPO sample living in a group household (30.1%) is significantly different from the proportion reported in column (a) – the total landline sample (3.8%).

Table 2 (cont.): Sample profile, unweighted.

Selected characteristics	Landline Sample			Mobile Sample		
	Total (LL) (n=400) %	Landline & Mobile (n=342) %	LLO (n=58) %	Total (n=300) %	Mobile & LL (n=215) %	MPO (n=83) %
	a	b	c	d	e	f
Occupation						
Managers	11.3	11.2	11.8	13.3	15.8	7.1
Professionals	26.3	26.5	23.5	27.2	28.8	23.2
Technicians and Trades Workers	9.4	9.2	11.8	11.8	11.5	12.5
Community and Personal Service Workers	16.9	16.8	17.6	11.3	10.1	14.3
Clerical and Administrative workers	16.0	16.8	5.9	13.3	12.2	16.1
Sales Workers	6.1	6.6	-	6.7	7.2	5.4
Machinery Operators and Drivers	3.8	4.1	-	4.6	4.3	5.4
Labourers	7.0	5.6	23.5	10.8	8.6	16.1 ^a
Other occupation	2.3	2.6	-	1.0	1.4	-

Statistically significant at the 95% confidence interval. Significance testing carried out for columns a/d, a/f, b/e. For example, the proportion of labourers in the MPO sample (16.1%) is significantly different from the proportion reported in column (a) – the total landline sample (7.0%).

As reflected in the above, compared with respondents to the landline survey the MPO respondents were more likely to be male, were younger, more likely to reside in capital cities, more likely to be overseas born and were more likely to be living in a rental property, to have been living in their neighbourhood for less than five years and to be living in a group household. The MPO sample also yielded a higher proportion of employed persons, tertiary students and university graduates and a higher proportion of respondents who identified as Aboriginal and Torres Strait Islander.

The differences in the respondent profiles produced from the landline and mobile phone samples (Table 2, column a compared with column d) are not wholly explained by the differences in sample coverage. This is evident in the extent to which there are differences between the landline sample members who have a mobile phone and the mobile sample members who have a landline (columns b and e, Table 2).

The fact that there are differences where the landline and mobile phone samples overlap (i.e. persons who have both a landline and a mobile phone) is an interesting finding from this research. These variations can, at least in part, be attributed to the differences between a household-based and a person-based sampling methodology (with persons not being distributed across households proportionally) and also suggest that a different set of response dynamics may exist for the landline and mobile phone samples.

The respective telephone usage profiles of the two samples (see Table 3) may go some way to explaining this. For example, 11.8% of those interviewed via the landline sample frame describe their telecommunications behaviour as 'mobile mostly' whereas 32.9% of those interviewed via the mobile phone sample frame described their telecommunications behaviour as 'mobile mostly'. This suggests that the chances of obtaining an interview with a 'mobile mostly' person using a landline RDD sampling frame are relatively low.

Table 3: Telephone usage by sample type.

Telephone usage	Landline Sample			Mobile Sample		
	Total (LL)	Landline & Mobile	LLO	Total	Mobile & LL	MPO
	(n=400) %	(n=342) %	(n=58) %	(n=300) %	(n=215) %	(n=83) %
	a	b	c	d	e	f
Landline only	28.1	-	100.0	-	-	-
Landline mostly	31.0	43.1	-	18.2	23.6	-
Mixed	29.1	40.5	-	24.4	31.7	-
Mobile mostly	11.8	16.4	-	32.9	42.8	-
Mobile only	-	-	-	22.7	-	100.0
Not determined	-	-	-	1.9	1.9	-

Selected findings for the landline and mobile phone only (MPO) samples

Having established that the landline respondents and MPO respondents differ in terms of their demographic and socio-economic profiles, and also in terms of their use of landline telephones and mobile phones, the question remains as to whether these differences are still apparent once the survey results are weighted. (Note: Analysis presented later in this paper [Table 8, p14] looks at any underlying differences in the survey results when controlling for age and gender across the samples.)

A two-stage weighting procedure was used for this study whereby a **pre-weight** to adjust for the overlapping sampling design was calculated for persons with a mobile phone and persons without a mobile phone. Subject to one's telephone status (if a respondent had / did not have a mobile phone) this weight took into account the number of residential landlines and mobile phone numbers in Australia, the relative sample sizes, the number of in-scope persons per household and the number of persons in each household.

The **post stratification weights** were calculated using a raking procedure (sometimes called rim weighting or iterative proportional fitting). The population parameters adjusted for by this procedure were gender, age by educational attainment (university graduate or not), region (capital city / rest of state), telephone status (mobile only, landline and mobile, landline only) and birthplace (Australian born / overseas born from an English speaking background against overseas born from a non-English speaking background).

Looking firstly at the attitudinal questions included in the survey, reference to Table 4 shows no significant differences between the landline sample and the MPO sample with respect to the proportion of people nominating particular issues as the 'most important problem facing Australia'. However, when looking just at the top three issues by sample type we see some differences in the rankings. The top three problems facing Australia as nominated by the landline sample members were health care, the economy and the hung parliament. For the MPO sample the issues were the economy, the environment / climate change and immigration. There are no significant differences between the samples with respect to attitudes to the environment or attitudes to the level of immigration.

Table 4: Selected attitudes for the landline and MPO samples.

Selected attitudes	Landline (LL) (n=400) %	MPO (n=83) %
Most important problem facing Australia		
Health care	15.9	7.0
Economy/jobs	12.7	13.9
Hung parliament	12.1	4.8
Environment/climate change	11.3	12.6
Immigration/boat people	7.6	9.3
Level of immigration		
Too high	44.5	45.4
Attitude to the environment		
Very or fairly concerned	60.9	57.3

The **bolded** figures show the top three mentions for each sample.

This study placed considerable emphasis on understanding the differences between landline and MPO respondents in terms of health behaviours and health characteristics. These data show:

- A lower prevalence of 'at-risk' alcohol consumption amongst the landline sample (37.2%) compared with MPO sample (56.0%)
- A lower prevalence of binge drinking (ever had 20+ standard drinks in a session) amongst the landline sample (8.1%) compared with 21.8% for the MPO sample
- Lower rates of daily or occasional smoking amongst the landline sample (LL – 16.9%, MPO – 31.0%)
- Lower rates of lifetime illegal drug use (LL – 24.9%, MPO – 41.6%) and recent of illegal drug use (LL – 3.7%, MPO – 21.4%) amongst the landline sample, and
- Lower rates of self-assessed harm from one's own gambling amongst the landline sample (LL – 1.6%, MPO – 6.6%).

Table 5: Self-assessed health and selected health behaviours for the landline and MPO samples.

Selected characteristics	Landline (LL) (n=400) %	MPO (n=83) %
Self-assessed health		
Excellent / Very good	49.3	41.0
Single item mental health inventory		
Felt downhearted or sad some, most or all of the time	26.0	30.5
Alcohol consumption to harmful levels		
Ever has 4+ (females) / 6+ (males) standard drinks in a day	37.2	56.0 [#]
Binge drinkers		
Ever has 20+ standard drinks in a session	8.1	21.8 [#]
Smoking status		
Current smoker (Smoke daily or occasionally)	16.9	31.0 [#]
Use of illegal drugs		
Ever used	24.9	41.6 [#]
Used in last 12 months	3.7	21.4 [#]
Single item problem gambling scale		
Ever had an issue with your gambling	1.6	6.6 [#]

Statistically significant at the 95% confidence interval.

Reference to Table 6 shows that, compared to MPO sample members, landline sample members were approximately half as likely to report not being able to get help from neighbours when needed (LL- 12.7%, MPO – 23.6%), and also significantly less likely to report not being able to get help from friends when needed (LL- 1.0%, MPO – 5.3%).

When looking at indicators of financial hardship the survey estimates show that landline sample members were significantly less likely to have experienced some form of financial hardship in the last 12 months (LL- 20.7%, MPO – 41.6%) and significantly less likely to not be able to raise \$2,000 in 2 days in an emergency (LL – 7.2%, MPO- 22.1%).

Table 6: Financial hardship, capacity of social networks and social cohesion for the landline and MPO samples.

Selected characteristics	Landline (LL) (n=400)	MPO (n=83)
	%	%
Social support networks		
Can you get help from family members when you need it? (% No, not at all)	5.9	3.1
Can you get help from neighbours when you need it? (% No, not at all)	12.7	23.6 [#]
Can you get help from friends when you need it? (% No, not at all)	1.0	5.3 [#]
Could one of your relatives or friends care for YOU (or your children) in an emergency? (% No, not at all)	11.0	7.3
Indicators of financial hardship in the last 12 months		
Unable to pay the gas, electricity or telephone bills on time	16.3	24.3
Unable to make rent or mortgage payments on time	4.8	13.9 [#]
Had to go without meals	4.9	11.8 [#]
Had to sell something in order to get by	5.3	7.3
Had to seek financial assistance from a welfare or community agency	5.9	16.8 [#]
<i>Nett: Experienced some financial difficulty in the last 12 months</i>	20.7	41.6 [#]
Unable to raise \$2,000 in 2 days in an emergency	7.2	22.1 [#]
Neighbourhood cohesion		
Local area is a place where people of different backgrounds get on well together	75.5	73.5

Statistically significant at the 95% confidence interval.

Table 7 shows that when compared to MPO sample members, landline sample members were more than twice as likely to have experienced a house break in or burglary (LL – 41.4%, MPO- 19.5%), less likely to have experienced a physical assault (LL – 17.0%, MPO – 22.1%) and about half as likely to have ever experienced discrimination because of their national or ethnic or religious background (LL – 18.9%, MPO – 34.8%).

Table 7: Local safety, crime victimization and discrimination for the landline and MPO samples.

	Landline (LL) (n=400) %	MPO (n=83) %
Perceptions of local safety		
Definitely safe walking down own street after dark)	56.1	52.7
Crime victimisation		
A house break in or burglary	41.4	19.5 [#]
Vehicle theft	21.0	14.0
Physical assault or robbery	17.0	22.1 [#]
<i>Nett: Victim of selected crimes</i>	55.8	33.7 [#]
Discrimination		
Ever experienced discrimination in Australia because of your national or ethnic background or religion?	18.9	34.8 [#]

Statistically significant at the 95% confidence interval.

While the above results show that the survey estimates for mobile phone only persons are quite different to those obtained from the landline sample there is a possibility that these differences are explained by other characteristics which distinguish the MPO population from the landline population. The obvious factor being the relative youth of the MPO sample.

To further explore this issue a logistic regression model was developed which assessed the likelihood of a respondent belonging to the MPO sample or not by a range of characteristics (when controlling for age and gender).

In the following analysis an odds ratio of 1 means the variable has no effect in terms of predicting the outcome (in this case belonging to the MPO sample), 2 means that the odds of being in the MPO sample are double if a respondent has that certain characteristic and 0.5 means that the odds of being in the MPO sample are half as likely for a respondent with that characteristic. Significant results (at the 95% confidence interval) are indicated by a hash symbol (#).

Reference to Table 8 shows that (when controlling for gender and age) respondents from mobile phone only households are:

- Approximately four times more likely to have had a self-assessed gambling problem
- Approximately twice as likely to be unable to raise \$2,000 in 2 days in an emergency, to have used illegal drugs in the last 12 months or to be a smoker
- 1.7 times more likely to have experienced financial hardship in the last 12 months, and
- Only half as likely (0.514) to have ever been a victim of selected crimes.

Table 8: Characteristics associated with being in the MPO sample.

Selected character	Odds ratio
Self-assessed health (Excellent / Very good)	0.800
At-risk levels of alcohol consumption	0.932
Binge drinking	1.342
Current smoker	2.14 [#]
Ever used illegal drugs	1.065
Used illegal drugs in the last 12 months	2.177 [#]
Self-assessed problem with gambling	4.039 [#]
Felt downhearted or sad some, most or all of the time	0.835
Can definitely get help when needed	1.182
Unable to raise \$2,000 in 2 days in an emergency	2.179 [#]
Ever been a victim of selected crimes	0.514 [#]
Ever experienced discrimination	1.575
Experienced selected financial difficulties	1.707 [#]

Statistically significant at the 95% confidence interval.

Selected findings using the dual-frame survey estimates

Having demonstrated that the survey estimates produced from the MPO sample differ in many respects to those obtained from the landline sample, the question remains as to whether, given the relatively small proportion of MPO households in the population, these differences are sufficiently large to have a meaningful effect on our overall telephone survey estimates.

The research literature outlines two approaches to including mobile phones in telephone surveys. One is a non-overlapping design whereby the mobile phone sample is screened in order to obtain interviews from individuals living in 'mobile phone only' households (this approach is replicated for this survey by combining the Landline & MPO samples). The alternative approach uses an overlapping design whereby the two sample frames are combined and the relative chances of selection adjusted for by the weighting processes.

Table 9 compares the results for the selected survey measures from the landline sample with those obtained from a merged landline and MPO sample and those obtained from the full dual-frame design. The net difference (+/- %) between the landline estimates and the dual-frame estimates are also shown.

Within the constraints of this survey, particularly the sample size limitations, this analysis suggests that relative to the dual-frame design the landline survey results tend to underestimate:

- 'at-risk' alcohol consumption and binge drinking
- smoking prevalence
- illegal drug use
- problem gambling
- depression
- support available from neighbours
- financial hardship, and
- experience of discrimination.

The measure obtained from the landline survey also tended to slightly over estimate of the extent of property crime.

Table 9: Selected findings for landline, landline and MPO and dual-frame samples

	Landline (LL) (n=400)	Landline & MPO (n=483)	Dual-frame (n=700)	Nett difference +/- % (a-c)
	%	%	%	
	a	b	c	d
Most important problem facing Australia				
Health care	15.9	13.7	12.4	+3.4
Economy/jobs	12.7	13.0	13.4	-0.7
Hung parliament	12.1	10.4	11.2	+1.0
Environment/climate change	11.3	11.7	12.8	-1.4
Immigration/boat people	7.6	8.0	6.7	+0.9
Level of immigration				
Too high	44.5	44.7	43.4	+1.1
Attitude to the environment				
Very or fairly concerned	60.9	60.1	60.7	+0.3
Self-assessed health				
Excellent / Very good	49.3	47.3	48.9	+0.4
Single item mental health inventory				
Felt downhearted or sad some, most or all of the time	26.0	27.1	30.0	-4.0
Alcohol consumption				
Ever has 4+ (females) 6+ (males) standard drinks in a day	37.2	41.8	44.2	-7.0
Binge drinkers				
Ever has 20+ standard drinks in a session	8.1	11.4	11.6 [#]	-3.5
Smoking status				
Current smoker (Smoke daily or occasionally)	16.9	20.3	18.6	-1.7
Use of illegal drugs				
Ever used	24.9	28.9	30.8	-5.9
Used in last 12 months	3.7	8.0	9.1 [#]	-5.4
Single item problem gambling scale				
Ever had an issue with your gambling	1.6	2.8	2.5	-0.9
Social support networks				
Can you get help from family members when you need it? (% No, not at all)	5.9	5.2	4.3	+1.6
Can you get help from neighbours when you need it? (% No, not at all)	12.7	15.2	17.2	-4.5
Can you get help from friends when you need it? (% No, not at all)	1.0	2.0	2.2	-1.2
Could one of your relatives or friends care for YOU (or your children) in an emergency? (% No, not at all)	11.0	10.1	9.1	+1.9

Table 9: Selected findings for the landline, landline and MPO and dual-frame samples (cont.)

	Landline (LL) (n=400) %	Landline & MPO (n=483) %	Dual-frame (n=700) %	Nett difference +/- % (a-c)
	a	b	c	D
Indicators of financial hardship in the last 12 months				
Unable to pay the gas, electricity or telephone bills on time	16.3	18.2	17.7	-1.4
Unable to make rent or mortgage payments	4.8	7.0	6.9	-2.1
Had to go without meals	4.9	6.6	6.8	-1.9
Had to sell something in order to get by	5.3	5.8	6.6	-1.3
Had to seek financial assistance from a welfare or community agency	5.9	8.6	9.4	-3.5
<i>Nett: Experienced some financial difficulty in the last 12 months</i>	20.7	25.8	26.4	-5.7
Unable to raise \$2,000 in 2 days in an emergency	7.2	10.8	11.7	-4.5
Neighbourhood cohesion				
Local area is a place where people of different backgrounds get on well together (% Agree)	75.5	74.9	79.1	-3.6
Perceptions of local safety				
Definitely safe walking down own street after dark)	56.2	55.3	55.7	0.6
Crime victimisation				
A house break in or burglary	41.4	36.1	37.5	+3.9
Vehicle theft	21.0	19.3	19.3	+1.7
Physical assault or robbery	17.0	18.2	18.3	-1.3
<i>Nett: Victim of selected crimes</i>	55.8	50.4	51.8	+4.0
Discrimination				
Ever experienced discrimination in Australia because of your national or ethnic background or religion?	18.9	22.8	23.5	-4.6

Concluding remarks and next steps

This dual-frame demonstration survey has provided valuable insights into the conduct of dual-frame landline and mobile phone telephone surveys in Australia and demonstrated that undertaking such surveys is feasible in an Australian survey research context.

The survey findings confirm that the demographic and socio-economic profile of MPO respondents is different to that of traditional landline respondents and also reveals differences in the profile of landline respondents and mobile phone respondents more generally, despite the substantial overlap between the two sample frames.

The estimates produced from this demonstration survey suggest that the exclusion of mobile phone only households from traditional RDD landline surveys is having an effect on the resultant survey estimates. This is likely to be an area of increasing concern for survey researchers as the proportion of mobile phone only households continues to grow.

Depending upon reaction to this study, the Social Research Centre hopes to undertake a larger study, perhaps as an omnibus survey, in order to subject these initial findings to further testing, increase the topics covered and enable more robust conclusions to be drawn. In terms of future developments the key to being able to undertake dual-frame surveys using a geographically stratified sample is to be able to append a postcode or some other sort of geographic marker to randomly generated mobile phone numbers. This is a critical next step for the evolution of this methodology in Australia.

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