

Chapter 6

Italy

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6.1 Introduction

CATI has been widely used in Italian surveys since the 1980s. As a matter of fact telephone interviewing, compared to traditional face-to-face data collection methods, allows to save time and money. It also offers further advantages: better control over the quality of the interview through a centralized facility, continuous monitoring and supervision, and the opportunity to include experiment-like variables in the survey (Groves et al. 1988, Piazza and Sniderman 1998). Institutional data producers, academic researchers and companies in the market research and polls industries have been taking advantage of all these opportunities.

Sampling designs adopted in phone surveys and polls range from non-probabilistic quota sampling to more valuable probabilistic sampling approaches, similarly to what happens in face-to-face surveys.

Voting lists and population registers represent the typical frames for face-to-face surveys. The former are publicly available and cover all Italian citizens having political rights while institutional data collectors may use the latter in order to cover foreign residents, too. Public phone directories have traditionally been used for the same purpose in landline phone surveys on the general population. In this last case, once a household owning a sampled telephone number has been contacted, through randomization techniques such as the nearest birthday method or the Kish grid, a single individual may be selected for interview within the household.

Dedicated phone directories – clients' records, for instance – may be used for specific sub-populations as in the case of customer surveys, instead of the white pages. To the best of our knowledge, the former also represent the only adopted sampling frame for mobile phone surveys and polls. The setting up of a comprehensive phone directory (for which the Italian acronym is DBU) – listing both landline and mobile phones, irrespective of the different operators – has been promoted by the Authority for Communications in 2002. Various types of printed

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and electronic phone directories are produced and distributed on the basis of available DBU data. For privacy reasons, citizens may choose to register or not in the DBU. In practice, almost all private mobile phones are unlisted in phone directories.

In both landline and mobile phone surveys in Italy RDD is rarely used as a technique to select the sample units. It is considered inefficient and expensive. Landline phone directories have been favored as a sampling frame, given their reasonable coverage. During the 1990s households with no landline phone at home were about the 9.5 % of all households (Callegaro and Poggio 2004: 485). They were also a rather homogeneous group: mainly elderly families, with a low level of education, residing in rural areas. Public phone directories used to be rather comprehensive at that time. Having one's number not listed was only an issue for VIPs or people with serious security problems. Only 6 % of landline phones were not listed in the white pages in 2001 (Callegaro and Poggio 2004: 503). However, this relatively favorable context has rapidly worsened during the last decade (see section 6.3).

6.2 The Reality of Phone Surveys in Italy

How are phone surveys used by the different organizations in the field?

The Italian National Institute of Statistics (ISTAT) is the main institutional data producer in the country. It still collects most of its survey data via personal interviews, either PAPI or CAPI. This is especially the case when all household members have to be interviewed, when major measurement issues are involved or – in any case – when the questionnaire is particularly time-demanding.

However, there are some exceptions where phone surveys are used instead of personal interviews. All the three studies surveying employment outcomes after the completion of – respectively – secondary schools, higher education, and doctoral studies are carried out through phone surveys. The availability of dedicated alumni's phone directories, as a sampling frame, is probably a big reason for this choice.

Another example of ISTAT taking advantage of phone surveys is when individuals are re-interviewed. The Labor force survey design implies four subsequent interviews to the same individual within the same year. The first one is carried out with CAPI techniques, on a sample obtained from population registers, while CATI is used for further interviews. The same approach is used in a few dedicated phone surveys whose sample is extracted from respondents to a larger previous survey conducted through personal interviews.

Finally, phone surveys have also been used by ISTAT in another few surveys: the Women's Safety Survey, the Citizens' Safety Survey, the Business Trips and Holidays Survey and the Birth Survey. A phone survey has been preferred for the former two studies because of measurement considerations, given that some of the questions were particularly sensitive. Phone directories represent the sampling frame for these two surveys and for the third study. The Birth Survey is an interesting methodological experiment: the households sample is obtained from the population registers. It is then possible to link parents' full names to public

phone directories in order to obtain the contact number. Only the matched households could be interviewed: in the 2002 survey this linked “factual sample” represented only 60.4 % of the sample originally obtained from the population registers. Furthermore, another 21 % of the households in this restricted factual sample were excluded from the survey because the matched phone number was either wrong or non-existent¹.

The quality of the data from these last four surveys is problematical. They rely – either directly or indirectly – on phone directories as a sampling frame while it is clear that these lists have serious coverage problems (see section 6.4).

ISTAT phone surveys do usually obtain a good response rate. However, this is also the result of a “mandatory answer” policy for major public surveys.

Phone surveys are very common in the polls market where the timing of data delivery is a crucial matter. The CATI approach has actually allowed the flourishing of this industry.

The research design of opinion polls, whose results are reported by the media, are – according to Italian law – to be publicly available for auditing purposes. Similar special provisions exist for political and electoral polls. Two open archives for methodological information on polls used by the media have been established by the Authority for Communications and by the Government Department for Information and Publishing². Despite the law aiming to make public auditing possible, the quality of the methodological information provided in the two archives is generally poor and ambiguous, to the point that it is often impossible to understand even key issues: whether or not a sample has been defined on a probabilistic basis, or which sampling frame has been used (Billari and Rosina 2006, Di Gioia 2009, Gasperoni and Callegaro 2007, Pisati 2008). In fact it is impossible to assess the quality of the polls. For this reason, the Authority for Communications, who controls both the depositing procedures, established stricter regulations in December 2010.

Despite many deficiencies, the two archives still provide valuable information on how phone surveys are carried out in the market, under the assumption that the methodologies adopted for polls used by the media are not different from the ones used in surveys that have not been made public³.

Gasperoni and Callegaro (2007, 2008) investigated the accuracy of polls before the general elections of 2001, 2006 and 2008. They scrutinized the methodological information available on these polls in the electoral polls archive. They focused on the pre-electoral period polls and on national surveys targeted to the whole electorate of the Chamber of Deputies. Overall they considered 69, 73 and 72 different polls respectively, for the three years. To our purposes, their main findings may be summarized as follows.

¹ Own calculations, or reported data, from figures presented in ISTAT (2006: 65, 72), that provide a detailed and very interesting discussion of the Birth Survey methodology.

² Bill number 249, 31st July 1997, article 1, and bill number 28, 22nd February 2000, article 8, respectively. The two archives are available at the following web sites: <http://www.agcom.it> and <http://www.sondaggiolettorali.it>.

³ See also Gasperoni (2007) for a detailed discussion on electoral pollsters in Italy.

The quality of the polls' documentation is poor and it is possibly getting worse, but available indications allow to reasonably assume that quota sampling is the industry standard and that phone directories represent the typical sampling frame.

CATI is the common mode adopted for data collection. Personal interviews have definitely become marginal while web surveys have a limited importance: nine polls have been carried out in the latter mode in 2001, five in 2006 and six in 2008; twelve mixed mode surveys – mostly CATI and CAWI – have been reported among the ones conducted in 2008. Unfortunately, no reliable information is available for an assessment of the response rate and of item nonresponse due to an undefined proportion of undecided voters and non-voters.

As a way to complement this inventory we have scrutinized the methodological reports available in the general polls archive (all but the political ones) for all the 233 surveys – targeted to general population – that have been carried out in the first semester of 2010 (registered in the archive as to December 31th 2010). Most of the polls were carried out with CATI methods; 31 were web-based and seven used personal interviews; five used dedicated telepanel devices and 14 a mixed-mode approach. Typically, no information on the sampling design and frame is provided in a methodologically appropriate way. Instead, it is only claimed that the sample is representative of the population of interest. Quota sampling is rarely explicitly acknowledged but the usual reference to random and stratified – but not probabilistic – procedures and the typical length of the field period (1 - 2 days in 64 % of the phone surveys) allows us to reasonably assume that quota sampling is the standard.

How phone surveys are used in market research is less visible. In order to get some insight, we have reviewed the information available to potential buyers – on their web site – for their main services. We have considered major members of ASSIRM (Associazione tra Istituti di Ricerche di Mercato, Sondaggi di Opinione, Ricerca Sociale), the main association for market, social and opinion research professionals. Our focus is on general population surveys rather than on specific targets surveys.

Almost all companies offer a wide range of services as regards data collection modes – CAPI, CATI, CAWI, postal questionnaires, experiment-like panels and other computer-assisted methods using dedicated remote meters, smartphone-like – depending on their area of expertise and on the clients' needs and budget.

All the companies offer ad hoc solutions. However, their “multiclient” or “omnibus” surveys, their panels and – in general – their studies that are repeated over the time, probably offer a clearer picture of common practices and standards.

CAPI surveys and panels are generally offered, apparently based on samples obtained from the voting lists, as a standard top product. This is especially the case for established companies. Corresponding CATI surveys are also generally offered as a standard product which allows fast data delivery and a low budget alternative. No information is usually available on the sampling design and frame of the latter. Most of the companies offer CAWI solutions, at least for some areas of interests. According to the information available, they are based on opt-in panels. In some cases, the adoption of solutions aimed at controlling the effects of self-recruitment is declared but not explained.

Some of the companies adopt and offer telepanels, apparently established on the basis of a sample from the voting list, through dedicated communication devices.

Data on the industry expenditures provide some further indications on the role of different types of surveys, even if the differences in the typical costs should be taken into account. According to the Esomar industry report (2010: 102), Italy's market research industry spends 85% on quantitative research, 12% on qualitative and 3% on other kinds of research. Within the quantitative research segment, CATI accounts for 19% of the expenditures, while face to face surveys account for 27% and online surveys for 7%. The automated, digital and electronic meters segment accounts for the largest quota: 43%. Other quantitative research including postal surveys accounts for only 4% of total expenditures.

Finally, it has turned out to be impossible to carry out a systematic inventory of academically-led surveys. To our limited knowledge, they have a high variability in the mode of data collection and in their sampling design. Data collection is often out-sourced to companies in the field (see above) and the survey strategy can usually be agreed with them, according to their common practices. We can reasonably assume that phone directories represent the sampling frame adopted in phone surveys for the general population. We can also reasonably assume that landline – rather than mobile – phones are targeted the most and that these studies share the same methodological problems as examined in this chapter for other market and institutional data collectors.

Important exceptions subsist, but in general it should be considered that academic research funding is a big issue in Italy. For this reason, low cost – and often low quality – solutions are more likely to be preferred. In this sense it is not surprising that Italy is currently not participating in the European Social Survey and that one of the main reasons for that seems to be the costs of national face-to-face surveys.

To conclude, we would like to remark that mobile phones seem to be rarely used in Italian surveys.

6.3 Main Recent Changes in the Technological and Social Context

The technological context of personal communication has been rapidly changing over the last two decades, the same as in the other European countries. The diffusion of mobile phones, the use of the Internet and, more recently, the progressive convergence between information and communications technologies – Internet on mobiles, smartphones, VOIP solutions – are setting new opportunities and constraints for survey activity.

On the consumers' side, the diffusion of mobile phones across all social strata of the Italian society has led to an overall theoretical telephone coverage of 97.5% of all individuals (see Tables 6.1a and 6.1b) - never seen before – considering both landline and mobile phones. Mobile phones have become affordable to all pockets as has the cost of calls, if one considers the myriad of available promotional

schemes: 84.7% of Italian adults regularly use a mobile phone. This gives the opportunity – at least in principle – to use mobile phone surveys in order to speed up data collection and to reach those who are hard to find at home in an easier way.

A similar trend is evident when considering the recent popularization of smartphones that allow access to the Internet when moving. This will soon make self-administered mobile surveys possible. However, it is still to be considered that, according to the latest available estimates, only 2.9 % of adult individuals regularly use mobile connections (see Tables 6.1a and 6.1b).

Finally, the diffusion of the Internet gives the opportunity of self-administered surveys to be conducted via web. According to our estimates, 36 % of Italian adults has an Internet connection at home and regularly uses it. This may progressively lead to web surveys taking the place of the phone surveys anytime when there is no need for an interviewer.

Please consider that when estimating the use of mobile phones, of the Internet at home and on mobile we have relied on definitions stricter than simply owning such devices and connections (see notes to Tables 6.1a and 6.1b for details). Our interest is in their factual use, which is a more reliable precondition for the possibility to contact individuals for a survey. This may result in figures for the diffusion of mobile phones, the Internet at home and on mobile that are lower than the ones shown in other studies reporting ownership figures, often at the household level.

From the production side, phone surveys certainly contributed to the flourishing of the market research and polls industry in the past. They have allowed centralizing the field and the data management, to simplify data collection and data cleaning procedures. Overall, when compared to face-to-face interviews, phone surveys require less personnel, time and money. The liberalization of the telephone market – since the late 1990s – and the development of VOIP technologies have allowed further cuts on the costs of these activities.

On the other hand, the previously mentioned technological developments have also involved new methodological and logistics challenges to phone surveys.

Coverage error in landline phone surveys is in our opinion the most relevant one: 28% of the Italian households (ISTAT 2010: 40) own only mobile phones and no landline. This is a big issue in a country where surveys are generally carried out using phone directories as a sampling frame (see section 6.2).

Some other problems are also worth noting. Before 1998 a single state-owned company used to manage all landline telephone services and three companies the mobile ones. With the liberalization of the telephone market the number of actors in the field has increased. ISTAT (2008: 8) estimates that 52 different companies were managing mobile or landline phone services at the end of 2007. It is worth noticing that most of them were landline operators, while the mobile market is less fragmented (four operators only), given the higher costs to enter this market.

Furthermore, VOIP operators have recently started to use standard – geographically structured – telephone numbers. So, the latter are increasingly assuming virtual connotations and this may for example result in VOIP users living abroad to use a telephone number with Milan or other cities prefix. Because of both consumers' protection laws and marketing strategies, the telephone number portability between different operators has also been increasing.

Table 6.1a Personal phone arrangements, listing of the landline phone number in the white pages and use of Internet connection, by selected individual and household characteristics - 2009. Percentage values – 18 y. o. individuals or older⁴.

	<i>Phone arrangements</i>			
	no phone (1)	landline only* (2)	mobile only (3)	both type (4)
<i>Sex</i>				
Male	1.9	9.7	26.1	62.3
Female	3.0	15.8	22.8	58.4
<i>Age</i>				
18-30 y. o.	0.5	0.8	32.7	66.0
31-40 y. o.	1.0	1.0	41.1	56.9
41-50 y. o.	1.3	2.7	26.2	69.8
51-60 y. o.	1.6	7.4	19.2	71.8
61-70 y. o.	2.9	20.5	13.9	62.7
older	8.2	50.4	8.0	33.4
<i>Formal education</i>				
Low level or none	7.5	38.5	16.9	37.1
Lower secondary	1.6	7.5	32.1	58.8
Upper secondary	0.5	3.5	25.0	71.0
University level	0.3	2.4	17.3	80.0
<i>Condition</i>				
Employed	0.5	1.8	29.6	68.1
Unemployed	1.6	2.5	39.4	56.5
Retired	4.5	34.2	10.4	50.9
Housewife	4.8	20.2	24.7	50.3
Student	0.2	0.2	17.3	82.3
Other	11.3	35.2	16.4	37.1
<i>Type of household</i>				
Single	6.6	22.7	35.3	35.4
Couple	2.4	21.6	19.9	56.1
Couple with children	0.9	5.5	22.6	71.0
Lone parent with children	3.0	12.1	27.4	57.5
Other	4.0	18.3	24.5	53.2
<i>Housing tenure</i>				
Tenant	3.4	8.3	48.2	41.1
Home owner	2.2	13.9	18.4	65.5
Other	3.1	12.4	31.1	53.4
<i>Geographical area</i>				
Northwest	1.5	13.2	20.4	64.9
Third Italy	1.6	14.7	19.9	63.8
South & Islands	3.7	11.4	29.9	55.0
<i>All Individuals</i>	2.5	12.8	24.4	60.3

⁴ Notes: (1) - (4) Landline availability means that the subject owns a landline phone at home; mobile phone availability refers to individuals using a mobile phone at least once a week regardless of whose the property is; (1) + (2) + (3) + (4) = 100 %.

Table 6.1b Personal phone arrangements (continued)⁵

	<i>Number not listed in white pages*</i>	<i>Total landline non-coverage*</i>	<i>Have connection and use of the Internet</i>	
	(5)	(6)	at home (7)	on mobile (8)
<i>Sex</i>				
Male	18.1	41.0	41.4	4.0
Female	18.6	39.6	31.0	1.8
<i>Age</i>				
18-30 y.o.	22.0	47.9	64.6	6.5
31-40 y.o.	25.8	57.0	50.3	4.6
41-50 y.o.	21.3	42.9	45.3	2.8
51-60 y.o.	17.6	34.7	31.6	1.8
61-70 y.o.	14.1	28.5	12.9	0.5
older	10.1	24.7	2.0	0.0
<i>Formal education</i>				
Low level or none	11.5	33.1	2.0	0.1
Lower secondary	18.5	46.0	25.7	2.0
Upper secondary	21.2	41.3	56.0	4.5
University level	23.8	37.2	74.0	5.7
<i>Condition</i>				
Employed	22.6	45.9	53.2	4.4
Unemployed	19.6	52.6	39.8	4.5
Retired	11.9	25.0	9.4	0.3
Housewife	16.9	41.4	11.6	0.6
Student	18.8	33.0	83.5	5.9
Other	17.7	40.5	12.6	1.2
<i>Type of household</i>				
Single	20.4	53.8	21.3	2.0
Couple	16.1	34.8	22.4	1.8
Couple with children	18.6	37.7	47.3	3.7
Lone parent with children	20.1	44.4	38.1	2.9
Other	18.3	41.6	26.2	2.1
<i>Housing tenure</i>				
Tenant	27.9	65.1	27.6	3.0
Home owner	16.9	34.0	38.0	2.9
Other	19.1	46.8	35.4	2.4
<i>Geographical area</i>				
Northwest	21.9	39.0	39.5	3.0
Third Italy	14.9	33.2	38.6	3.0
South & Islands	18.7	46.0	32.1	2.6
<i>All Individuals</i>	<i>18.4</i>	<i>40.4</i>	<i>36.0</i>	<i>2.9</i>

Sources: own calculations from a 38,386 individuals sub-sample (aged 18 or over only) from the ISTAT survey *Aspetti della vita quotidiana* 2009.

⁵ (6) is the total landline non-coverage (no phone or not in the white pages): (6) = (1) + (3) + [(2) + (4)] x (5) / 100. (7) - (8) The availability and use of an Internet connection at home refers to people having a connection to the Internet at home and have surfed the Internet at least once over the three months prior to interview; the availability and use of an Internet connection on mobile phones refers to people who have reported using an Internet connection from mobile phones or palmtops. "Third Italy" refers to the Northeast of the country and some of the regions in the centre of Italy (Emilia Romagna, Tuscany, Umbria and Marche).

Overall, these changes puzzle the setting of phone numbers, making it impossible to distinguish between landline and merely virtual phones, to use geographical information built in landline numbers and to discriminate by phone operator. This is clearly challenging when defining the survey strategy and logistics and in terms of eligibility assessment. This is especially true if one considers that it is a quite common practice to use more than one mobile working with different operators in order to take advantage of the different promotional schemes⁶.

Furthermore, without a national authority, the multiplication of phone operators makes an effective cooperation between the operators and the organizations working with surveys to make the phone numbers structure understandable, practically impossible.

Several changes have also affected the broader social context and related legal provisions. When considering the use of the telephone, privacy has progressively become an issue, albeit if with some contradictory behavior. So while people commonly have very personal dialogues on their mobile phones in public spaces, they prefer that nobody calls them for phone surveys and especially telemarketing at home⁷. Insisting marketing campaigns by phone operators, or by other companies, and polls for which people show no particular interest, have definitely become more and more common than in the past. Hence, receiving an unsolicited call is generally perceived as annoying. This might be one of the reasons why 19.1 % of the Italian households owning a landline phone are not listed in the white pages (own calculations, see Table 6.1b for data source).

The Italian Data Protection Authority and the legislators are still handling this issue at a normative level. In principle, Italian households wishing to be listed in the phone directories have been given the opportunity to give their consent to receiving unsolicited calls or not (market research surveys and telemarketing are considered to be the same under the Italian law)⁸. Companies in the field have eluded these regulations by using previous editions of the white pages, which still remain a useful public data source given the low mobility of Italians, and other similar trickeries. A “do not call” register has been established in February 2011 to counter such practices⁹. Citizens may ask to be recorded there at no cost while operators in the sector will have to check their potential contacts’ list against this register in order to get a list of phone numbers which can be contacted. Such list should be updated every 15 days.

To conclude, both social behavior and legal provisions regarding individual data protection have radically transformed the usability of phone directories as sampling lists.

⁶ 90.2 million SIM cards were estimated active at the end of 2007 (ISTAT 2008: 2) vis-à-vis 56.3 resident individuals aged six or older.

⁷ However, it is practically impossible to be contacted by unknown people on a mobile phone, if not by chance.

⁸ Italian Data Protection Authority, Act 15 July 2004.

⁹ More details are available on the register web site: <http://www.registrodelleopposizioni.it>.

6.4 Coverage Error as the Big Issue in Phone Surveys

As we have already discussed in Callegaro and Poggio (2004) and anticipated in the previous section, coverage of sampling frames adopted in landline phone surveys is our main concern when thinking about the future of this type of inquiry. When dedicated lists – clients, alumni, for instance – are available as both a sampling frame and a source of contact information, there is clearly no problem. As such phone surveys organizations may fully take advantages of this, if their intention is to generalize to some specific sub-populations: clients of the survey, high school alumni.

The problem arises when surveys intend to provide estimates for the general population – or general sub-populations – and when phone directories are, directly or indirectly, used as a sampling frame. At the individual level, their non-coverage sums up to 40.4 % (see Table 6.1b) when considering “mobiles only” families, individuals with no phone at all and members of households with a landline phone that is not listed in the white pages. As already noted, this figure is likely to rise further.

Coverage error is a function of both non-coverage – whose magnitude has been assessed above – and the difference between covered and uncovered populations in the variable of interest (Groves 1989). Researchers can usually gain some control of non-coverage, while the variable of interest is typically an object of research.

However, we should consider that non-coverage is clearly structured along important social differentiation variables, as shown in Tables 6.1a and 6.1b consistently with previous research (Callegaro and Poggio 2004, Marbach 2010). Also investigated human behaviors, attitudes and opinions are usually related to such variables. This means that – with just some hypothetical exceptions – estimates from landline phone surveys are likely to be affected by a significant coverage error, because of both the high level of non-coverage and its association with typical variables of interest. Households’ and individuals’ characteristics are likely to influence both coverage and almost all potential variables of interest.

It is surprising to see how polls companies and even institutional and academic data collectors are underestimating the problem.

Web-based inquiries are emerging as an alternative to phone surveys, especially in the market research and in the polls industry. They may be used with a view of cutting costs further. They are also supposed to be representative of the Italian population. Indeed, according to the sources we have scrutinized, most of the web surveys are based on non-probabilistic opt-in samples. Moreover, they do not include the non-Internet population, estimated at about 64 % of Italian adults (see section 6.3)¹⁰.

¹⁰Higher estimates are usually reported for having connection to the Internet. They usually refer to the household level. ISTAT for instance reports that 47.3 % of Italian households have an Internet connection at home (ISTAT 2010: 37). We have preferred to provide individual level figures, reflecting both within-household differences and the real use of the Internet. See notes to Tables 6.1a and 6.1b for details.

6.5 Conclusions: No Way to Skip a Low Cost–Low Quality Vicious Circle?

Is it possible to trace some of the most likely developments for phone surveys in Italy, given the ever-changing technological and social context and the coverage error implicit in the use of phone directories? Let us focus on general population surveys for which more quality problems exist.

Here we can trace different scenarios. The first one represents the worst hypothesis: low quality-low cost phone surveys will be carried out on the grounds of a substantial statistical illiteracy of both typical buyers and the general audience. Samples will continue to be defined on a non-probabilistic basis or, in the probabilistic case, to rely on increasingly unreliable sampling frames. No strict auditing practices – we here consider both legal provisions for polls and peer-judgment in the scientific community – will make an easy life for low quality-low cost solutions. Official statistics and academics will also continue to ignore coverage problems; if honest, they will limit their estimates' generalization to the households in the white pages only, regardless of the lack of substantiality of such a selection. As already mentioned, this kind of telephone surveys may be also replaced by low quality-low cost web surveys, based on self-recruited samples of some sort.

A second, more optimistic, scenario considers the attempt to conciliate the possibility of combining all the methodological and logistics advantages of phone (and web) surveys with the preservation of the capacity to generalize results to the whole population, on probabilistic grounds. The big issue here is the sampling frame to be used or, alternatively, the possible ways to control the coverage error deriving from public phone directories.

Different strategies may be adopted here, as we have already discussed in Callegaro and Poggio (2004). They can be grouped into three different options even if we have no pretention to be exhaustive.

One first option is to model the coverage probability using data from face-to-face surveys with a sample defined from population registers. Obtained parameters may be used in order to adjust the estimates of phone surveys derived from white pages sampling frames. However, this is not likely to be a very effective strategy due to the rapidity of the changes that have been discussed and the typical time needed to release face-to-face survey data. As an example, we can consider that non-coverage in the mentioned ISTAT's Birth Survey 2002 was estimated ex-ante at around 19 % of the population of interest, using data from a 2001 face-to-face survey (ISTAT 2006: 19). Non-coverage was actually twice this figure, without considering further problems deriving from wrong or non-existing telephone numbers (see section 6.2).

A second option is to consider alternative sampling frames. In principle, RDD may be considered for both landline and mobile phones. In practice, a traditional aversion to this sampling strategy remains. Further difficulties will arise from unknown eligibility problems deriving from what has been discussed in section 6.3. In any case, the implementation of the "do not call" register will only result in this effort becoming frustrating.

Finally, a third – and probably more reliable option – is to consider phone surveys within a broader mixed-mode survey strategy, that is something rather new in Italy. Reliable sampling frames exist: voting lists, population registers or geographical units, as in the US experience. They can be used instead of landline phone directories. Respondents may be contacted by post and be offered to participate in the survey in different ways, either through CATI and/or via a web questionnaire, to mention some of the options. Obviously, other methodological problems arise from mixed-mode surveys, and the time frame for their field periods are in any case longer than the one in phone surveys. Non-cooperation will remain an issue to deal with. But coverage error would not represent a big issue any more.

As an example, Bazzoli, Buzzi and Poggio have recently completed a small-scale mixed-mode survey, targeted at young households, on the demand for nursery schools in one single city in Northern Italy¹¹. This small survey is also intended as a methodological experiment and seems to provide encouraging results for this survey strategy. The sample was drawn from the local population register. This allowed covering both national and foreign residents. All the households were contacted by post. The ones wishing to participate in the survey were given the possibility to complete a web questionnaire or to call a toll-free number to arrange a phone interview and give their landline or mobile phone number. Furthermore, all contacted households were informed that an interviewer would have contacted them for a face-to-face interview at home, as a default option.

All the ones who did not complete the web questionnaire were contacted for a CATI interview if their phone numbers were available, either because they provided themselves or because of successful linkage between the population register and the public phone directory records. An interviewer was sent to the address of the remaining sample persons for which no telephone number was available.

This methodological experience will be analyzed in more detail, but it is already possible to draw some rough conclusions about survey costs. Assuming CATI interviews as a cost benchmark, the minor costs of interviews collected through the web questionnaire to a large extent compensate for the greater costs for PAPI interviews conducted with less cooperative respondents and for posted materials¹².

This seems to mark the possibility of conciliating the use of a comprehensive sampling frame with the need to save time and money in the data collection

¹¹ <http://www.crescereatrento.it>.

¹² A mixed-mode approach (CAWI + CATI) is also adopted in the Almalaurea survey, the largest survey on graduates' professional outcomes, in order to control costs of interviews. The sample and contact information are derived from the universities' records. Alumni are contacted by email, whenever possible, and asked to complete a web questionnaire. Telephone interviews are arranged, as a default option, only for those whose email is unknown and for the nonrespondents to emails (Camillo et al. 2009).

process by using CATI or CAWI techniques whenever possible. This can be an effective option to break the low cost–low quality vicious circle without increasing the costs greatly.

Acknowledgements. We are grateful to Giancarlo Gasperoni, Michael Bosnjak, Enzo Loner and the book's editors for their useful comments. Figures presented are partially based on microdata from the ISTAT Multipurpose Survey on Household - Aspects of daily life 2009. Access to the dataset has been granted through the data archive of the Laboratorio di ricerca didattica at the Faculty of Sociology, University of Trento. The analysis presented is under the full and exclusive responsibility of the authors.

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Uncorrected Proofs