ISSN 2389-8186
E-ISSN 2389-8194
Vol. 2, No. 1
Marzo de 2015
doi: http://dx.doi.org/10.16967%2Frpe.v2n1a7

ARTÍCULOS ORIGINALES

Telephone Surveys: Strategies to Improve Collaboration

VIDAL DÍAZ DE RADA[a], IDOIA PORTILLA[b]

pp. **93-110**

ABSTRACT This article analyzes the aspects that could affect participation in telephone surveys and proposes strategies to improve it. The objective is to help the development of this type of marketing and opinion research in order to obtain valid information to make company decisions or the knowledge of the status of the opinion.

The work is divided into three parts. Firstly, a revision of the literature is made to determine the aspects that might limit participation, by studying the situation in Spain. Secondly, eleven telephone and face-to-face surveys, which took place in this country are analyzed, highlighting their rights and wrongs to determine the motivation behind not taking a survey. Thirdly, ten strategies are proposed to reduce the nonresponse rate in telephone surveys, which should be applied during the process of information collection. Putting this into practice would allow a decrease in the nonresponse rate and encourage cooperation by obtaining high-quality information; something that is vital for the management of both companies and governments.

KEYWORDS cooperation, telephone survey, nonresponse rate, representation.

HISTORY OF THIS PAPER
The original version of this paper was written in Spanish. This English version is published in order to reach a wider audience. To cite this paper, please refer to its original version, as follows:

HOW TO CITE THIS ARTICLE?:
Díaz de Rada, V. & Portilla, I. (2015). Encuestas telefónicas: estrategias para mejorar la colaboración. *Perspectiva Empresarial, 2*(1), 97-115. http://dx.doi.org/10.16967%2Frpe.v2n1a7

RECIBIDO: 2 de julio de 2014
APROBADO: 12 de febrero de 2015

CORRESPONDENCIA:
Vidal Díaz de Rada,
Departamento de Sociología - Universidad Pública de Navarra
Campus de Arrosadía s/n
31006 Pamplona- España.

* *This text is part of a research financed by the Ministry of Economy and Competitiveness, ref. CSO2012-34257. We appreciate the substantial improvements made by two anonymous reviewers and by the Editorial Board of the "Business Perspective" magazine. We also thank Sara Pasadas Del Amo (IESA-CSIC) for providing us with the studies included in table 6 (see annex), and J. J. Toharia, from Metroscopia, for tabulating the document "Study on Social Climate".*

a *Doctor in Sociology, Deputy Director of the Sociology Department, Universidad Pública de Navarra, Spain. E-mail: vidal@unavarra.es*

b *Doctor in Economic Sciences, Professor at the Communication School, Universidad de Navarra, Spain. E-mail: iportilla@unav.es*

ISSN 2389-8186
E-ISSN 2389-8194
Vol. 2, No. 1
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Encuestas telefónicas: estrategias para mejorar la colaboración

RESUMEN Este artículo analiza qué aspectos pueden afectar la participación en las encuestas telefónicas y plantea estrategias para mejorarla. El objetivo es ayudar al desarrollo de este tipo de investigaciones de mercado y opinión para lograr información válida para la toma de decisiones empresariales o el conocimiento del estado de opinión.

El trabajo se divide en tres partes. En primer lugar, se realiza una revisión de la literatura para determinar los aspectos que pueden limitar la participación, estudiando la situación en España. En segundo lugar, se analizan once encuestas telefónicas y presenciales realizadas en este país, destacando sus aciertos y errores para determinar los motivos por los que no se responde a una encuesta. En tercer lugar, se proponen diez estrategias para reducir la no respuesta en encuestas telefónicas y que deberían aplicarse durante el proceso de recogida de la información. Su puesta en práctica permitiría reducir la no respuesta y alentar la cooperación logrando información de mayor calidad, algo vital para la gestión de empresas y gobiernos.

PALABRAS CLAVE cooperación, encuesta telefónica, no respuesta, representatividad.

HOW TO CITE THIS PAPER?
¿CÓMO CITO EL ARTÍCULO?

CHICAGO:
Díaz de Rada, Vidal y Portilla, Idoia. 2015. "Encuestas telefónicas: estrategias para mejorar la colaboración". *Perspectiva Empresarial* 2: 97-115. http://dx.doi.org/10.16967%2Frpe.v2n1a7

MLA:
Díaz de Rada, Vidal y Portilla, Idoia. "Encuestas telefónicas: estrategias para mejorar la colaboración". *Perspectiva Empresarial* 2.1 (2015): 97-115. Digital. http://dx.doi.org/10.16967%2Frpe.v2n1a7

Pesquisas telefônicas: estratégias para melhorar a colaboração

RESUMO Este artigo analisa que aspectos podem afetar a participação nas pesquisas telefônicas e sugere estratégias para melhorá-la. O objetivo é ajudar o desenvolvimento deste tipo de pesquisa de mercado e opinião para conseguir informação válida para a tomada de decisões empresariais ou o conhecimento do estado de opinião. O trabalho divide-se em três partes. Em primeiro lugar, realiza-se uma revisão da literatura para determinar os aspectos que podem limitar a participação, estudando a situação na Espanha. Em segundo lugar, analisam-se onze pesquisas telefônicas e presenciais realizadas neste país, destacando seus acertos e erros para determinar os motivos pelos quais não se responde a uma pesquisa. Em terceiro lugar, propõem-se dez estratégias para reduzir a não resposta em pesquisas telefônicas e que deveriam se aplicar durante o processo de coleta da informação. Sua aplicação permitiria reduzir a não resposta e incentivar a cooperação conseguindo informação de maior qualidade, algo vital para a gestão de empresas e governos.

PALAVRAS CHAVE cooperação, pesquisa telefônica, não resposta, representatividade.

Introduction

Business decision making needs proper and current information that may come from surveys, among other sources (Grande and Abascal, 2006). However, in order to have information from surveys, the participation of respondents is essential.

According to international codes of ethics, participation in market research studies must always be voluntary (ICC/Esomar, 2007), so it is essential to consider strategies that encourage participation while still respecting willingness.

When it comes to studies with the presence of interviewers, such as face-to-face and telephone surveys, these people's behavior is very important for obtaining interviews. In terms of information collection, it has been sufficiently demonstrated that face-to-face surveys get higher response levels than telephone surveys. Therefore, this analysis will focus on telephone surveys in order to present strategies that might improve respondent participation in them as well as in household surveys, although telephone surveys can be used in company studies, for example.

Firstly, the aspects that scholars believe may affect participation in telephone surveys will be reviewed through scientific contributions in this field. Then the situation of telephone surveys and various aspects about them will be analyzed focusing on Spain as a case study.

Second, we will analyze what happens during information collection, considering response and nonresponse in studies carried out with interviewers. We want to determine at what point lack of cooperation occurs in telephone surveys in comparison with face-to-face surveys.

After analyzing the situation in Spain based on the aspects considered, strategies to improve participation in telephone surveys in any country will be offered.

Aspects that can affect participation

The first arguments to explain low cooperation levels in surveys highlighted the small number of people who are in their households during the day (Rossi, Wright and Anderson, 1983, p. 9). Fifteen years later, Smith (1995) added other social aspects that also cause homes to be empty most of the day and, therefore, the phone is not answered for telephone surveys. We are talking about the increased number of women working full time outside households and the reduction in household size (Smith, 1995, p. 168).

On the other hand, Smith (1995) also points out the possible existence of a "saturation effect", given the high number of surveys carried out due to the increase of telephone surveys against face-to-face interviews. This "saturation" has increased in the last few years (Presser and McCulloch, 2013) and will continue to do so in the future (Sedransk and Tourangeau, 2013). In fact, many experts use this argument to explain the decline in cooperation in recent years (Presser and McCulloch, 2013 and Sedransk and Tourangeau, 2013, among others).

Finally, another aspect that may affect survey participation is confidence in surveys or the image that respondents have about them. A bad image of surveys may reduce participation interest. Therefore, it is very important to be careful about the image of surveys to achieve respondent confidence, as it has been recognized by professional associations like Esomar.

Therefore, when studying telephone survey participation it is relevant to obtain data on three aspects: social features of the population, the possible existence of a saturation effect and the degree of confidence of this population towards surveys. These three aspects will now be studied for the Spanish case, after a brief introduction about the situation of telephone surveys in market research.

Telephone surveys in Spain

In 2001, telephone surveys used as an information collection tool in Spain represented 48% of billing costs, at the expense of a reduction of face-to-face surveys (table 1). This trend favoring telephone surveys has also been seen in other countries (De Leeuw et al., 2002, Kalton, 2000, p. 5; De Leeuw, 2004, p. 22; De Leeuw, 2008; Tourangeau, 2004, p. 775; Lavrakas, 2008; Steeh, 2008; Lavrakas, 2010, among others). However, in recent years, both have reached similar billing percentages of around 23%. In any case, given the lower cost of telephone surveys (Sticht, 2000; De Vaus, 2002; Dennis, 2011; Wert, 2011), it can be understood why they are more commonly used than face-to-face surveys.

In 2010 and 2011, the online information collection modality, which includes information gathering through electronic or automatic means, increased significantly (table 1). During the same period, surveys that still used interviewers (telephone and face-to-face surveys) reached a total of 46% of billing costs, which justifies why their study still remains necessary. It can therefore be said that telephone surveys are still a very significant information collection method in Spain.

Social characteristics of the population

As previously mentioned, participation may be affected by an increased rate of female activity as well as household size reduction, which makes it difficult to find a resident at the time of calling.

An analysis of these indicators in the Spanish reality reveals that the participation rate of women has gone from 34,73% in 1991 to 52,27% in 2010 (INE, 2012). Therefore, a significant increase which affects the growing absence of women from households throughout the day is observed, forcing interviewers to make phone calls outside usual working hours.

At the same time, household size has reduced significantly for the 1991-2001 census period, changing from 3,26 to 2,86 members. However, this aspect changed for the 2001-2011 period with minimal reduction, reaching 2,58 members per household (INE, 2012). Therefore, this aspect will not affect much survey participation in recent years, although we will have to pay close attention to this number's trend.

Possible existence of a saturation effect

The growing number of surveys in a country can lead to a saturation effect among the population, which is reflected in decreased cooperation. In order to analyze if this effect exists in Spain, first billing costs of market study companies were analyzed, according to data provided by the Spanish Association of Market and Opinion Studies (Aedemo) and the National Association of Market Research and Public Opinion Companies (Aneimo). Based on this, billing costs in 2007 and 2008 were over 500 million euro, reducing slightly in 2009, increasing in 2010 and diminishing again in 2011. Between 2001 and 2008, this figure almost doubled. However, as noted by Presser and McCulloch (2011, p. 1029), it is difficult to "translate" billing cost increases into a higher number of surveys.

In the period between 1999 and 2001 there were over 8 million of studies per year (table 2), but since 2003 Aneimo and Aedemo are not providing information on the number of surveys. In order to estimate it, the billing/number of surveys ratio will be obtained and the "cost" of each survey will be estimated. According to the data available, the average in Spain is between 24 and 25 euros since 1998, so it could be estimated that the number of annual surveys since 2007 is over 10 million. But it should be noted that it is an indicative figure. Since 2000, the use of face-to-face surveys has decreased remarkably due to the use of inexpensive surveys such as telephone interviews and, since 2007, online surveys. Considering that

TABLE 1. Billing percentages of the market research industry in Spain according to information collection methods

	1991	1993	1995	1997	1998	1999	2000	2001	2002	2005	2007	2008	2009	2010	2011
Face-to-face	65	76	56	66	46	56	38	36	39	39	12	30	28	24	24
Phone	25	20	36	28	44	30	41	48	47	34	19	29	26	23	22
Mail	9	4	8	6	7	5	6	8	9	4	6	2	2	2	2
Electronic means Mystery Shopper				2			6	3							
Online										10	(*) 25	(-16,2) 23	17	40	(**) 42
Others				3	9	15	2	2	13	38	16	15	34	11	10

Notes:

(*) After 2008 it considers information collection through electronic or automatic means, online, online traffic measurements and web audience measurements.

(**) For 2011: information collection through electronic or automatic means, 23,8%; online, 16,5%, online traffic measurements and web audience measurements (1,3%).

Sources: Aedemo (2006, 2012); Alós (several years); Aneimo and Aedem (2009); Aneimo (2010); Castellanos (2008); Aedemo, Aneimo and Esomar (2012).

the estimation of the number of surveys was carried out taking into account the billing/number of surveys ratio in 2000, due to the use of inexpensive surveys it could be said that the total number of surveys might be over 10 million.

Another argument which illustrates that it is a "low estimate" is that the previously cited study doesn't consider the work carried out by companies that do not belong to Aedemo, such as research departments of big corporations, universities, social research institutes of autonomous governments or regional, national or international statistics institutes. For example, important public entities in Spain such as the Sociological Research Center (CIS) and the National Institute of Statistics (INE) conducted around 3 million surveys in 2008.

Being aware that 10 million annual surveys is a low estimate, this figure and a population over 18 years of age (which is the one that normally takes part in surveys) will be considered. It corresponds to 38,853,982 people according to the census as of January 1, 2011. These figures allow us to say that each year approximately 26% of the population is surveyed in Spain. However, according to a study by CIS (2007a), 41% of the population has never been interviewed before (table 3), a fact that agrees with data from Metroscopia (2011), which indicates that 61% of the participants had never answered a survey before.

This survey participation level in Spain is much lower than in other countries, as demonstrated by the Council for Marketing and Opinion Research (CMOR) in its analysis of the American society. It states that the percentage of Americans who have participated in surveys has gone from 19% in 1978 to 82% in 2003 (CMOR, 2003). Considering only studies conducted by the American federal government, Presser and McCulloch (2011, p. 1029) indicate that the number of studies has increased by 50% between 1984 and 2004, while the number of interviewees increased by 300% in the same period (from 2,6 million to 10,16).

Therefore, while each year one quarter of the Spanish population might be interviewed, the saturation level is not as high as in other countries like the United States. In any case, again, it is important to pay attention to this figure and its evolution.

Social image of surveys

Other aspects that may affect collaboration in surveys are the trust they generate and their perceived utility, among others. These aspects are decisive for respondents to devote some time to answer questions from an interviewer.

In Spain, the 2007 study by CIS on the social image of surveys reveals that 20% of the Spanish population believes completely in the sincerity of the interviewees and two out of three people believe "partly" in their honesty (table 4). Almost half of respondents (46%) says that they do not trust survey results much, which together with a 13% of respondents who do not trust them at all (60%), creates a rather gloomy scenario.

TABLE 2. Net billing of market study companies according to study methodology (expressed in millions of euros)

	1993	1995	1997	1998	1999	2000	2001	2002	2003 (*)	2005	2007	2008	2009	2010	2011
Total billing	179	186	213	230	249	268	281	306	n.a.	401	532	537	495,0	528,9	505,4
Number of surveys (expressed in thousands)	7.016	6,706	8,878	7,855	8,427	8,808	9,072	6,639	n.a.	n.s.	n.s.	n.s	n.s	n.s.	
QUANTITATIVE BILLING / NUMBER OF SURVEYS RATIO															
		18,3	20,15	24,6	24,29	24,95	25,40	38,26							
Estimation (for the 1998-2000 period: 24,61)										8,839	10,607	10,878	10,087	10,375	10,201
Estimation (for the 1998-2000 period: 24,80)										8,461	10,697	10,971	10,174	10,464	10,288

Notes:

(*) It was not possible to obtain information for 2003 because of lack of collaboration of the companies interviewed.

n.a.: Not available.

n.a.: Not surveyed. The number of surveys is not asked since 2003.

Sources: Aedemo (2006, 2012); Alós (several years); Aneimo and Aedem (2009); Aneimo (2010); Castellanos (2008); Aedemo, Aneimo and Esomar (2012).

TABLE 3. Survey participation level

	THREE METHODS (face-to-face, phone and internet)	PHONE SURVEYS
2. Have you ever been interviewed in a survey (apart from this one)?		
Yes, more than once	45,1%	39,4%
Yes, once	13,4%	13,7%
Has not been interviewed	41,3%	46,7%
Does not answer	0,1%	0,1%
Number of cases	3,537	1,548
2a. When was the last time?		
Last month	21,2%	13,5%
Last year	33,5%	38,1%
More than a year ago	39,2%	44,9%
Does not remember	6,0%	3,2%
Does not answer	0,2%	0,2%
Number of cases	2,071	824
2b. Last time, the interview was...		
Personal, in your home	21,3%	11,2%
Personal, not in your home	18,2%	18,8%
Over the phone	45,2%	65,6%
Others	12,0%	3,7%
Personal, on the street	2,7%	0,0%
Does not answer	0,7%	0,6%
Number of cases	2,069	823

Source: Own elaboration based on data from the 2676 study by the Sociological Research Center (2007).

TABLE 4. Survey usefulness/reliability

	THREE METHODS (face-to-face, phone and internet)	PHONE SURVEYS
7. Do you believe that the people interviewed answer honestly?		
Yes, absolutely	20,4%	18,0%
Yes, partly	62,7%	62,7%
Never	10,7%	12,9%
Does not know	6,1%	6,2%
Does not answer	0,1%	0,2%
Number of cases	3,536	1,549
5. In general, to what extent do you trust the results of this type (*) of surveys? (Related to political, social and cultural surveys)		
Absolutely	2,4%	1,9%
Very much	34,6%	30,4%
Not much	45,7%	48,7%
Does not trust them	12,8%	14,4%
Does not know	3,7%	3,5%
Does not answer	0,7%	1,0%
Number of cases	3,537	1,549
6. Do you believe that survey results represent the entire Spanish population?		
They represent the entire Spanish population	13,1%	10,0%
They don't represent it at all	20,0%	11,6%
They represent only some sectors	54,1%	69,8%
It depends (not read)	5,6%	2,6%
Doesn't know / doesn't answer	7,2%	6,1%
Number of cases	3,536	1,548

Source: Own elaboration based on data from the 2676 study by the Sociological Research Center (2007).

This view can be explained by the 20% of people who doubt that surveys represent the Spanish population and the 54% who believe that they only represent some sectors (CIS, 2007b).

These results are in stark contrast with the previously cited 2011 survey by Metroscopia, which reveals that 70% of the Spanish population sees surveys as a way to express their opinion (24% strongly agrees with this view and 45% agrees).

In short, it can be concluded that in Spain a high percentage of the population shows little or no confidence in survey results, although they are seen as a way to express opinion. Therefore, it seems that the current situation still allows the use of this information collecting tool, but if mistrust grows, the research sector might have to face some problems to get respondents.

Response and nonresponse in surveys carried out in Spain

To better understand participation in surveys and in order to establish strategies to improve it, it is necessary to analyze the reasons why a survey is not answered. This is important to discover under what circumstances nonresponse occurs, in order to suggest appropriate strategies.

The study takes into account various face-to-face and telephone surveys carried out in Spain on similar populations. Nonresponse is

analyzed based on concrete cases, highlighting the good aspects and the errors of certain polls, without any intention to criticize or underestimate the studies in question. From all these surveys, information on sample selection, sample size, nonresponse rates and causes of rejections will be taken into account.

Face-to-face surveys

Four investigations with different respondent location systems (table 5) are considered:

1. The first study locates interviewees through random routes and quotas. It also uses substitutions when the selected person does not cooperate.
2. The second survey is based on the government's registers (census). It uses reserves to solve cooperation problems caused by absences and rejections.
3. The third survey is also based on the same source (the register), but with a permanent update (at least once a year). Regarding absence of response, three contact attempts are made.
4. Finally, the European Social Survey, based on register data from the previous year when it was carried out, employs strategies to increase cooperation of the study group.

The first three columns contain the theoretical sample, the achieved sample and the number of persons contacted. Nonresponse occurs because of framework problems and "other reasons", which are explained below.

Framework problems appear when contacting units that do not belong to the study group: empty homes, impossible to locate (they may be part of the municipal register but do not exist), intended for other purposes and inaccessible. Surveys based on routes and quotas include a "covered quota", a specific situation produced by the method used to select the last units. The common aspect to all of them is that the pollster "eliminates them" from the research before asking if respondents want to cooperate or not.

In addition to framework problems, the percentage of interviewees who do not want to cooperate (rejections) and those with unknown eligibility (absences) is presented. The sum of both constitutes nonresponse and the difference (up to 100) is the response rate.

As shown in table 5, surveys with routes and quotas have greater framework problems, which makes pollsters establish up to 21,5 contacts to obtain an interview. Another characteristic is the number of absences, which is remarkably higher than in the rest of investigations included in the table. The third characteristic is a rejection rate which is slightly above the rest of investigations. The overall consideration of absences and rejections provides a response rate of 27 to 31%, the lowest of all the research studies considered.

Framework problems affect all the investigations that use census registers, amounting to 15,7% in the European Social Survey. Something similar happens to the number of absences, which is around 10% in three out of the four studies considered. The low percentage of the European Social Survey is explained by the number of up to 7 visits to not contacted households (Riba, Torcal and Morales, 2010). This creates an increased rejection rate, which amounts to 16,4% even when refusal conversion strategies are used (Riba, Torcal and Morales, 2010). The surveys with fewer rejections are the active population survey (6%) and the survey on use of information and communication technologies in households, undoubtedly because surveys by the National Institute of Statistics (INE) included in the national statistical plan are mandatory. Although refusal to respond may be penalized, according to information from the general sub-direction of data sampling and collection from the National Institute of Statistics, so far sanctions have only been applied to companies and no households have ever been penalized.

Telephone surveys

The nonresponse typology in telephone surveys will be carried out based on five national investigations conducted by the Institute for Advanced Social Studies (IESA-CSIC) on population in general, two of them through landlines and three of them based on a mixed sampling framework (landlines and mobiles), following the methodology outlined in Pasadas et al. (2011). These investigations use quotas for selecting the last interviewees as well as substitutions for resounding refusal and after unsuccessful attempts to carry out the interview, which is the most common situation in the private sector of opinion and market research. Methodological features of these studies are presented in the annex.

TABLE 5. Response and nonresponse in various face-to-face research studies in Spain

				NONRESPONSE			
				Due to framework problems		Other reasons (*)	
	Theoretical sample (projected)	Real sample	Contacted units	Number	Percentage[a]	Rejections[b]	Absences[b]
Routes and quotas (nonresponse: substitutions)							
2004 CIS barometers	27,500	27,359	420,138	131,755[c]	31,3%	20,3%[d]	48,3%
2011 CIS barometers	15,000	14,827	318,314	86,836[c]	27,3%	20,3%[d]	52,4%
Census registers (nonresponse: reserves)							
European Health Survey 2009	23,097	22,188	37,006	4,972	21,5%	18,3%	27,5%
Survey on use of information and communication technologies in households 2010[e]	6,128	4,218	6,128	853	13,9%	10,2%	9,3%
Updated census registers (nonresponse: three attempts)							
Active population survey 2010[e]	58,693	38,863	58,693	12,271	20,9%	6,4%	9,9%
Census registers with cooperation strategies (nonresponse: seven attempts, incentives, refusal conversion, more information to interviewers)							
European social survey 2008	3,962	2,576	3,962	624	15,7%	16,4%	7,2%

Notes:

(a) Percentage respect to the number of contacted units.

(b) Percentage respect to "surveyable" population or the theoretical sample minus framework problems. Their addition is the nonresponse rate. This value minus 100 provides the response answer.

(c) Sample framework problems in barometers correspond to the contact established with "no household", "household of immigrants" and "failed contact for not meeting the quota".

(d) It covers problems to access the building, households who refuse any explanation and negatives from men and women to answer the interview.

(e) Only interviews during the first visit have been considered. Subsequent interviews to selected households have been omitted.

Sources: Díaz de Rada and Núñez (2008); Sociological Research Center (2011); National Institute of Statistics (2009); INE (2010b, 2010c); Metroscopia (2009).

Table 6 presents information which is similar to that used by face-to-face surveys in table 5. The first three columns show the theoretical sample, the number of people contacted and the number of contacts made to obtain an interview, which is important in surveys that use substitution to achieve the expected sample size. The actual sample is not presented because all the research studies use replacements to achieve the expected sample size.

Nonresponse caused by framework problems includes calls to fax lines, calls to numbers which do not belong to households, out of order numbers and the "covered quota". The latter implies, as in table 5, a greater percentage of fruitless contacts. The last two columns include the rejection percentage and units with unknown eligibility: no answer, voice mail, not able to communicate/busy, phone with restricted calls, untraceable, turned off or out of coverage phone.

The fourth and fifth columns of table 6 ("framework issues") show the high number of contacts made to units which are not part of the sampling framework. Although their numbers are similar to those of face-to-face surveys with routes and quotas shown in table 5, these increase remarkably in the surveys made on mixed settings. As with face-to-face surveys, most framework problems are generated by "covered quota" contacts, given the pollster's impossibility to continue with the interview process.

After framework problems, nonresponse components are analyzed, which reveals big differences in comparison with face-to-face surveys. First, high rejection levels in telephone surveys, which are around 50% for landlines, are two or three times higher than respondent rejection in face-to-face interviews. Most of the negatives are caused by direct rejections, since incomplete questionnaires ("leaves interview") represent 3-5% of the negatives. It's a common problem of telephone surveys (Peleteiro and Gabardo, 2006; Vicente and Reis, 2009), as mentioned by Curtin et al. (2005) in their analysis on the American

consumer's attitude survey conducted by the University of Michigan. They found an increase of 0,86 percentage points in rejection levels and a 0,22 point reduction in refusal conversions (Curtin et al., 2005, p. 19). This aspect is also analyzed by other experts like Lavrakas (2010, p. 486), who places refusal conversion between 10 and 20%, well below estimates from other authors that referred to conversions of 25-40% (Groves and Lyberg, 1988).

The last column of table 5 deals with absences and has been called "unknown eligibility" because with telephone surveys it is more difficult to distinguish empty households and absences, just as in face-to-face surveys.

Still, no contact in telephone surveys is notably lower than in face-to-face surveys and it corresponds to about half of surveys to landlines. The differences between landlines and mixed (landlines plus mobile phones) samples is explained by the large number of mobile phones which are turned off or out of coverage or which aren't answered. These phone numbers, according to contributions from experts (Curtin et al., 2005: 89; Lavrakas, 2010, p. 481; Pasadas del Amo et al., 2011, p. 50), could be removed from the sampling frame, as they are inactive (unused lines which are not eligible). It also includes people who only answer calls from known numbers, which could be classified as "disguised rejection"[1].

In cases where "communication is established after more than five attempts, or when there is no answer after more than ten attempts, an interview is unlikely to occur, even after thirty attempts" (Lavrakas, 2010, p. 581). Another case is that of about 10-13% of responses from answering machines with a default answering message (instead of a message recorded by the user), which do not allow callers to know if they are contacting a home or a company.

These three situations (turned off/out of coverage phones, constant attempts to establish communication and answering machines) represent 43%, 30% and 27% of nonresponse. These high percentages explain the lower rejection rate of mixed surveys, where the common occurrence of the situations mentioned above "tilts" the percentage towards unknown eligibility, with a subsequent decline in rejection levels.

The "apparent" worst figures of mixed surveys (landlines plus mobile phones) usually leave a negative impression. However, although contact rates are lower, they represent the opinion of 20% of the Spanish population without a fixed telephone who is therefore impossible to locate otherwise (National Institute of Statistics, 2010a), which explains why it is commonly used in neighboring countries (among others, Callegaro, 2002; Callegaro and Poggio, 2004 and 2006; Kuusela and Simpanen, 2002; Kuusela, Callegaro and Vehovar, 2007; Peytchev, Baxter and Carley-Baster, 2007). It must also be taken into account, as mentioned by several studies, that this sector has a very specific typology, as it involves young people, unstable work situations, etc. (Kuusela and Simpanen, 2002; Pasadas del Amo, Zarco Uribe-Echevarria and Soria Zambrano, 2004; Peleteiro and Gabardo, 2006, p. 22; Trujillo, Dominguez Alvarez and Pasadas del Amo, 2005, p. 9; Brick et al., 2007; Vicente and Reis, 2009; Ansolabehere and Schaffner, 2010; Mareck, 2010; Carley-Baxter et al., 2010; Courtney and Everett, 2011; Link and Lai, 2011; Lynn and Kaminska, 2011). These groups are not commonly considered in polls and practically never in electoral surveys, which mostly contact landlines. It might be said that response levels are worse but in return population coverage has increased, given that all the population with a telephone can be reached, regardless of the fact that they are landlines or mobile phones.

It is evident that these nonresponse differences between face-to-face and telephone surveys are given by the possibility of making free calls. Making several calls to a home in different days and at different times allows the caller to discover if such home is empty, but it also generates higher refusal levels, since many absences are transferred to real rejections to participate in surveys. On the other hand, the fact that more calls have to be made each time (Steeh, 2008, p. 224; Curtin et al., 2005, p. (88) requires longer field work for telephone surveys.

Strategies to improve telephone survey participation

Developing strategies to reduce nonresponse in telephone surveys requires, first, specifying in detail the search process of people who will answer the questionnaire. The process followed

1 Ideas of Sara Pasadas de Amo, who we want to thank.

TABLE 6. National telephone surveys carried out by the Institute for Advanced Social Studies (IESA-CSIC)

				NONRESPONSE			
				Due to framework problems		Other reasons (*)	
	Theoretical sample (projected)	Contacted units	Number of contacts per interview	Not surveyable[a]	Percentage[b]	Rejections[c]	Unknown elegibility[c]
Only to landlines							
Tourism	6,949	42,478	6,11	13,197	31,3%	48,7%	27,6%
Science and technology	1,531	18,144	14,89	6,961	30,5%	53,7%	36,2%
Landlines and mobile phones							
Sports	2,018	26,196	12,98	14,005	53,5%	38,9%	44,6%
Economic crisis and tourism	1,620	16,830	10,39	6,838	41,2%	43,4%	40,2%
Image of Andalucia	1,214	18,657	15,37	6,918	37,1%	47,4%	42,2%

Notes:

(a) It comprises "number does not exist/out of order", "not part of the study group/companies", "fax" and covered quota.

(b) Percentage respect to the number of contacts.

(c) Percentage respect to "surveyable": the theoretical sample minus framework problems. The remaining amount (up to 100) would be the minimal response rate, RR1 formula of Aapor, 2011.

Source: Own elaboration with data from the Institute for Advanced Social Studies, IESA-CSIC.

by an interviewer will now be reviewed in order to propose some strategies that may increase cooperation.

Process before the interview

After calling the household, the interviewer explains the reason for the call to the person who answers the phone. Sometimes the interviewer must make sure that the unit is part of the population studied (a research on mobile phone users, for example, may only be answered by those who own such devices). This implies the need to make some filter questions that provide information on the adequacy of that sample unit.

Subsequently, the interviewer will request certain information about household composition in order to select the person to interview, provided that sampling is not nominative. In particular, questions about the number of men and women in the household and their ages may be asked, as this information is necessary to apply a random selection process to choose the person to interview. Logically, this information is requested only in households with more than one person (80%, according to the census), since if only one person lives in the house, he or she will be interviewed. Similarly, when the research collects general data about the household or other information that may be provided by any of the people who reside there, it is possible to interview the person who answers the call. However, most of the times a selection must be made to determine the person to interview.

Once that person is selected, the interviewer must ask the respondent how that person can be contacted and then again explain the reason for the call. It must be noted that, according to the ICC/Esomar international code (2007, p. 2), collaboration from interviewees "must be based on proper information, which should never be misleading concerning the general purpose and nature of the project". At this moment, the interview process begins. But before getting to this point:

1. The household must be inhabited (not empty) and must have a phone.
2. At least one of the residents must be at home when the interviewer makes the call.
3. The person who is at home must answer (or open the door, in the case of face-to-face interviews) and agree to the interviewer's requirements (successful contact).
4. The person must provide the interviewer with the information needed to select a person in particular.
5. The person selected must be at home.
6. The person must agree to be interviewed.

Knowing this process can generate a different type of cooperation, which will allow interviewers to develop appropriate strategies to reduce non-response (Smith, 2007, p. 46; Blom et al., 2008; Blom, 2010; Matsuo et al., 2010; Schmeets, 2010; Stoop et al., 2010; Schmeets, 2010).

These strategies require, in some cases, great efforts in terms of fieldwork and a significant cost increase (Stoop et al., 2010, p. 1). In each case, the most appropriate strategies should be found. They are presented below in terms of order of application.

Strategy 1: call notification

In order to encourage participation, a future call from the interviewer should be announced before it actually occurs. Making contact with the interviewee before the interview itself is a very effective strategy that saves time, since the respondent knows the subject of the investigation beforehand (Turner, Smith and Lynn, 1998; Goldstein and Jennings, 2002; Gendall, 2005; Hembroff et al., 2005; Mann, 2005; Link and Mokdad, 2005; Olson, Lepkowski and Garabrant, 2011, among others).

Establishing previous contact gives professionalism to the research, legitimates time demand and reduces the "surprise" of an unexpected phone call. This notice, usually by mail, must explain the purpose of the study, the household selection process and the confidentiality of the results. It must also thank collaboration from respondents (Olson, Lepkowski and Garabrant, 2011). This information also saves time for the interviewer, as the interview can begin much earlier.

A meta-analysis carried out by De Leeuw et al. (2007) describes an 8 percentage point increase in the response rate to telephone surveys due to the use of letters (from 58% to 66%). According to the same study, the cooperation rate also increased from 64% to 75%.

However, a detailed study on letter content reveals that most of them do not include the required elements to increase response, which implies that their impact on collaboration could have been much higher. Most don't use the strategies that have been proven to be effective. Only one out of 21 promises a summary of the results, 14% do not mention when the research will end and the importance of the respondent's participation and 33% do not thank cooperation. The authors explain their effectiveness because 85% speak of altruism and evoke the principle of authority.

A problem posed by this strategy is the need for the names and addresses of the people to interview. It is important to mention that various investigations (among others, Morton Williams, 1993, p. 61 and Luiten, 2011) have shown that letter effectiveness is reduced when they are not customized, that is, when they are not addressed to a specific person using names and surnames. The European Social Survey uses three letters: the first one is sent two months prior to field work, the second one two weeks before the first contact and the third one is sent out to people who were not contacted before and people who expressed rejection.

Strategy 2: increasing the number of contacts

Increasing the number of contacts in a sample unit at different times of the day is the most widely used strategy at the international level, according to research by Smith (2007) in 29 countries. This resource is used by 90% of the studied researchers.

Making several calls significantly reduces absences and allows for a more accurate definition of whether the household is part of the study population. In Spain, for example, 15% of the households are empty. 21,4% of them have been built in the last 10 years (INE, 2013, p. 15). If these homes have a phone, 15% of calls would never be answered, which would require more calls to reach houses which are not empty. As mentioned earlier, if the average household size is reduced, it may also be necessary to make more calls to find a resident.

Another advantage of this strategy is that it extends sampling variability by including in the sample and locating people who spend less time at home, who belong to groups with specific demographic features (Peytchev et al., 2009; Stoop et al., 2010, pp. 118, 122-126). A large number of women is interviewed in the first contact. Some of their features are: over 55 years old; married; low study levels; retired and housewives. From the third contact on the number of men increases. Some of their features are: young and middle aged; single; secondary education; workers (61% of respondents in the fourth contact work, increasing to 65% in the following) and have children at home.

As we have seen, a higher rate of activity of some groups like women will make it more difficult to locate them, which can lead to an increase in terms of cost and time of the study. Therefore,

it is relevant to know the activity rate of the population under study to be able to predict time and costs of field work.

Strategy 3: extending fieldwork duration

Extending fieldwork duration will allow for major efforts when it comes to contacting units which were not previously reached. In one-week face-to-face studies there is not enough time to carry out a second, third or fourth visit to a household. It is almost impossible to do it at different times or visit a household twice over the weekend. However, telephone surveys allow for easier subsequent contact attempts. For example, in the case of IESA, up to 5 attempts per day were made. Some studies required up to 15 contact attempts to get an interview. This fact should be taken into account when estimating the time needed to obtain the desired sample.

Strategy 4: providing the interviewer with behavior patterns

It is important to provide the interviewer with behavior patterns when the first contact with a household is established. These first moments of interaction between the interviewer and the interviewee are fundamental, since most selected respondents choose whether to answer the survey or not in those first few seconds of contact (Morton-Williams, 1993; Groves and Couper, 1998; De Leeuw and Hox 2005; Durrant et al., 2010, among others).

Several studies have shown that interviewers who do not follow a rigid scheme at the beginning of interaction get higher response rates (Morton-Williams, 1993; SCPR, 1984; Groves and Couper, 1998; Durrant et al., 2010; Lipps and Pollien, 2011, among others). This means that those pollsters who abandon a rigid position and accommodate to the interaction situation established with the interviewee achieve higher levels of participation.

Strategy 5: use rewards

The use of rewards was a commonly used strategy in postal surveys during the 70s and 80s, obtaining large increases in response rates. Monetary incentives produce higher response rates than non-monetary incentives. If they are given out before the questionnaire is answered, they are more effective than if offered later (Van den Brakel, Vis-Visschers and Schmeets, 2006). In the first case, they are perceived as a gift and therefore they do not have to be very big (Rosen et al., 2011), while giving out rewards after responding is seen as a salary, which is normally perceived as not enough.

In the case of telephone surveys, incentives may be very specific, such as cost reduction. If calls to a mobile phone imply costs for the interviewee, as in the case of calls taken while abroad, this expense should be somehow compensated. The interviewee must never be harmed by participating in a study (ICC/Esomar, 2007, p. 2).

Strategy 6: reducing the information needed for interviewee selection

Requesting a large amount of information from a person that has just been contacted significantly increases the possibility of obtaining a rejection. Therefore, for example, prompting an individual about the age and sex of all household members will generate higher nonresponse levels than simply asking who the last person to have a birthday was. There are also some agencies, including the National Center for Social Research (1999), which carry out the selection process with the names of household residents.

Again, the first contact with interviewees must be paid attention to in order to avoid situations that may unsettle them, as this may lead to survey participation refusals.

Strategy 7: adapting the collection method

Telephone surveys are not always the most appropriate. It is important to use the information collection method that implies more collaboration (Peytchev et al., 2009). For example, if a high percentage of the study population does not have a landline, this system should not be used.

Numerous studies have shown that face-to-face surveys provide greater response levels than telephone surveys, with differences of up to 15% (Díaz de Rada, 2010, p. 18). However, they are more expensive and time consuming when it comes to field work (Díaz de Rada, 2002, p. 59). Therefore, the most important aspect must be determined, whether it is cost, time or a high participation rate.

On the other hand, the length of the questionnaire may require conducting face-to-face interviews instead of telephone surveys. Participation

in telephone surveys is better with short questionnaires, when the interview lasts less than 15 minutes (Díaz de Rada, 2002, p. 75).

Strategy 8: planning actions in case of refusal

The interviewer's responses in case of rejection should be planned in advance. There are basically three ways to deal with refusal.

Using refusal conversion strategies, based on how categorical the rejection is and the report made by the interviewer. It is important to mention that this strategy has been banned in some countries (Stoop et al., 2010, p. 35) and that its effectiveness is reducing, mainly in telephone surveys (Lavrakas, 2008 and 2010). Curtin et al. (2005, p. 93) estimate a 0,22 percentage points decrease per year in rejection conversion, which explains the 25-40% reduction of converted rejections in investigations from the 80's (Groves and Lyberg, 1988) to the current 10-20% (Lavrakas, 2010).

The second strategy derives from the previous one and it requires contacting the interviewee again. There are two possibilities.

The first one is to apply sub-sampling between rejections, something done by interviewers with high success rates. Also, the use of monetary incentives allows them to get cooperation from both soft and strong rejections, as opposed to conversion (Benthlehem and Kerstein, 1985).

Second, it is possible to apply a brief questionnaire with a group of questions in case of refusal (Lynn, 2003). The problem with this is the number and topic of questions to ask in the brief questionnaire, although recent research has shown that the weighting of the groups who answer this questionnaire provides a significant reduction of nonresponse bias (Matsuo et al., 2010).

The third way to deal with rejections is by replacing those respondents who do not cooperate with others, in order to cover for absences and rejections. This substitution can be random and planned in advance or the interviewer can apply it at the time of rejection.

Strategy 9: adjusting the workload of interviewers

In order to obtain higher collaboration rates, it is important to adjust the workload of each interviewer based on the difficulty to establish contact (Lipps and Pollien, 2011). The workload and wage assigned to each interviewer should relate to the difficulty to make contact. On many occasions, the actual interview process is only 35% of work time (Sudman, 1965, 1968; Azorín and Sanchez Crespo, 1986, p. 39; Díaz de Rada, 2001, pp. 31. 33; Rosen et al., 2011).

Strategy 10: analyzing the notes taken by interviewers and their coordinators The pollster's observation ability is essential at the moment of selecting the best times to establish successful contact, as well as the times when there will be more rejections (Lipps and Pollien, 2011). The most appropriate times to call can be affected by the activity rate of each group, so they may vary for the different groups that make up the study population.

Interviewers and supervisors can make subsequent work easier by learning from previous mistakes and replicating the strategies that have worked best. Therefore, it is important to analyze their observations and assess them properly.

Conclusions

The relevance of the data obtained by means of surveys in business decision making is unquestionable. But the validity of this information depends, among other factors, on guaranteeing that the study population answers the questionnaire proposed.

Participation in telephone surveys has been lower than in face-to-face surveys. It may have been affected by a decline in household size and an increase in female work rates, which makes it difficult to find respondents in the households contacted through calls. Knowledge on these aspects in each country can help researchers to estimate possible study costs until the desired sample is achieved, as well as to establish the most appropriate times to make the calls.

On the other hand, an increase in the number of surveys has been observed in many countries, which can lead to a saturation effect. It reduces the respondents' desire to participate in any surveys, which can be a problem for the entire sector. If the bad image of surveys is also considered, participation might be seriously endangered. At this point, the role of professional associations in maintaining a good reputation of the sector is essential. It is worth noting that many of them are promoting principles of transparency (British

Polling Council; Esomar, 2014; National Council on Public Polls, n.d.). Similarly, they should inform society about the importance of knowing people's opinions in order to offer to them the best products, services, laws, etc. (Stoetzel and Girard, 1973).

Concerning the issue of lack of response, in the case of Spain it is a fact mostly related to sampling framework issues, which requires greater efforts in terms of research design and field work. In particular, ten strategies to limit the problem of nonresponse and to encourage participation have been proposed, from the first contact with the household called to field work development and organization.

In any case, nonresponse is just one of the problems faced by surveys as research tools. It is necessary to bear in mind that this problem coexists with those arising from the measurement tool or questionnaire misapplication on the part of the interviewer. Other equally important problems are the use of overly motivated people, the incorrect definition of the study group or the errors produced during information preparation and processing. Therefore, the quality of the information obtained in telephone surveys depends on a careful process, from beginning to end. This is the most effective way for interviewees to participate in our surveys and provide us with their valuable answers.

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ANNEX. TECHNICAL CHARACTERISTICS OF PHONE SURVEYS USED

TOPIC	TOURISM
Territorial scope	Rest of Spain
Population	General
Administration	Only landlines
Sample framework	Random
Sample size	6,949
Questionnaire duration (in minutes)	11,82
Field work duration (in hours)	5772,4
Identification of study	E0710

TOPIC	SCIENCE AND TECHNOLOGY
Abbreviated title	CSIC knowledge and image
Territorial scope	National
Population	General
Administration	Only landlines
Sample framework	Random
Sample size	1,500
Questionnaire duration (in minutes)	14
Field work duration (in hours)	1616,35
Identification of study	E_0832

TOPIC	SPORTS AND LIFE QUALITY
Abbreviated title	Sports
Territorial scope	National
Population	General
Administration	Landlines and mobile phones
Sample framework	Random
Sample size	2,018
Questionnaire duration (in minutes)	12,43
Field work duration (in hours)	2428,55
Identification of study	E0727

TOPIC	ECONOMIC CRISIS AND TOURIST CONSUMPTION
Abbreviated title	Economic crisis and tourist consumption
Territorial scope	National
Population	General
Administration	Landlines and mobile phones
Sample framework	Random
Sample size	1,620
Questionnaire duration (in minutes)	10
Field work duration (in hours)	1175
Identification of study	E_0909

TOPIC	IMAGE OF ANDALUCIA
Abbreviated title	Image of Andalucia in the rest of Spain
Territorial scope	Rest of Spain
Population	General
Administration	Landlines and mobile phones
Sample framework	Random
Sample size	1,214
Questionnaire duration (in minutes)	20,45
Field work duration (in hours)	1580,05
Identification of study	E_1018