Determining the Margin of Error that Introduces Systematic Sampling of Public Opinion Polls (the Case of the Current Electorate of Tirana)

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Abstract

In polls that conducted today in Albanian reality, note that the margin of error is in the level + - 3%, regardless of other elements that affect in the validity of the polls. In the validity of answers, affects negatively also the questions with delicate problems[1]. For getting these sincere responses, an important role plays the nature of the questions.If the questionnaire is composed of questions that can be characterized as fragile, then for the question that in itself treat political topics, the interviewer has a tendency to not show sincere to these questions. Questions with delicate topics tend to give respond less valuable[2]. The methodology suggests that, when it is not possible to avoid delicate questions, become our best to preserve the anonymity of the respondent, which does not sure by the systematic sampling, which inevitably makes the respondent identifiable .So in this sample,respondents perceive themselves as identifiable. This causes them to feel threatened, if they give honest answers. Insincerity produces additional error that is intended to determine in the context of this paper. The study is not type explanatory, that uses working hypothesis as an assumed response to a research question, but experimental exploratory type, which seeks to test empirically the basic assumption and simultaneously determine the margins of error that are made in measurements to the public opinion when not respected the anonymity of respondents when we make delicate question.The experiment on which this paper is based, aims to test the basic assumption: The error that inserts when is not ensuring the anonymity of the respondents in a systematic sampling, when are made question that considered as delicate.

Keywords: Determining the Margin of Error that Introduces Systematic Sampling of Public Opinion Polls

Introduction

Methodology

To implement this empirical study, was needed a survey to evolve *in parallel* at the same time by two groups of interviewers, one family and one on the street. Was conducted a survey with a sample that does not identify respondents, namely, with quote to the last link of sampling. Also was conducted analog survey(with the same questionnaire), but with the sampling that identified respondents, according to a systematic sampling ("from gate to gate") in the last link of sampling.

More specifically, the two surveys, except that did with the same questionnaire in the street and in the family, they were performed *simultaneously (in parallel)* and in the same place and with the same sample size), but one of them assured anonymity of respondents through selection in last link of respondents with quote, by sex and age group with a questionnaire that had no delicate questions, while the other followed systematic method for selecting of families or working environments.

With a high degree of mistrust, nor can be expected that respondents believe to the promises of interviewers that, everything that they say "will remain among them." Therefore, to have data more reliable from the surveys, should not believe the "formula" that promises conservation of confidentiality of the answers given by respondents[3]. If we use a scheme of probabilistic sampling type (casual or systematic), which seeks to contact persons to be surveyed in a way, they perceive themselves as easily identifiable (by name, location, place of work), then it makes no sense to talk about maintaining of

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[1]Kocani A., Metodat e kërkimit sociologjik: Tiranë, UFO 2006,fq 79
[2]Kocani A., Metodat e kërkimit sociologjik: Tiranë, UFO 2006,fq 92
[3]Feraj H., Kocani A., (2013) *Anonymous or Confidentiality in Opinion Survey?(The Selective Aproach for Sampling in Surveys where are Included Delicate Questions)*, Mediterranean Journal of Social Sciences, Vol 4 No 2, May 2013, ISSN 2039-9340

their anonymity. The only thing that we can promise the respondents in this case is to promise the confidentiality of their responses. But such a promise, not results reliable in a society where the confidence level is too high (over 90%).

Then, it remains to be devised a sampling that allows to ensure anonymity of respondents. Namely, that allows respondents to perceive that they are not identifiable and, thus, frees them from fear that they could suffer, if will give honest answers to questions that they consider as sensitive. And this can be accomplished if in the design of the sampling, in the last link (which contacts persons to be interviewed) used the quota method (by age group and gender). According to our experience of surveys since 1998, the use of quotas in this last link, provides really noidentifiability of respondents, therefore the sincerity of their answers. In this way, can be taken with measurements the reliable data, which then can be extracted also the relatively reliable conclusions, which constitutes the main goal of each scientific research.

We emphasize once again that such a thing can be achieved in that the interviews make not in families and environments where respondents can be identified as such, but on the road away from their homes or their work, where they are seen as passers. But in this case, in the last link of sampling, we are forced to use a type of sampling **is not probabilistic** type, quota sampling. Such a sampling form contains an unspecified error, on standard, that should be measured with an ad hoc procedure type.[1]

RESULTS OF DATA PROCESSING

The error that inserts non consideration anonymity of respondents, when we make delicate question.

Also, to calculate the differences in the value of the answers on the questions that are made in the family (systematic sampling)), was elected as the indicator of aggregate type, the indicator of Subjective Welfare (ISW) provided by R.Inglehart. Through the creation of tables of frequency was conducted the calculation for ISW of answers in family and for the answers on the road. The difference between values of these two ISW would constitute the required difference, that involve the error that inserts quotas (survey on street), theerror that inserts non considering the anonimity of respondents and the statistical error that inserts sampling rate representation (survey in family). More specifically we have the following.

A. **Survey on the road:**

1. *The first question: Considering everything, do you think you are / satisfied with the life you do now?*

2. According to this question we have:
3. *Δ (***satisfaction from life) =** [(satisfied + quite satisfied) - (not satisfied +little satisfied)] = [(30.4%) - (26.6%)] = + 3.8%.
4. So we have to Δ (**satisfaction from life**) value of + 3.8%.
5. Let us find now than is the value of Δ (happiness). We have:

6. Second question: *In general, you feel yourselves:*

7. According to the second question we have:
8. Δ (Happiness) = [(Very/ happy + quite / happy) - (Not at all / happy + Not / happy] = [(49.4%) - (14%)] = + 35.4%.
9. So we have to Δ (Happiness) value of + 35.4%.
10. We have the value of ISW on the road:
11. ISW (street) = [Δ (life satisfaction) + Δ (Happiness)] / 2 =[+ 3.8% + 35.4%] / 2 = + 39.2% / 2 = + 19.6%
12. So we have to ISW (street) = + 19.6%

B. **The survey in the family:**

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[1] Kocani A., (2011) Përcaktimi i marzhit të gabimit që fut kuota në hallkën e fundit të kampionimit të një anketimi kundrejt kampionimit sistematik, AKTET Revistë shkencore e Institutit Alb-Shkenca, Vëll.IV, Nr.4, ISSN 2073-2244.

1. The first question: *Satisfaction from life?*

According to the first question we have:

Δ *(satisfaction from life)* = [(Fully / satisfied + Quite satisfied) - (Not at all satisfied + little satisfied = [(66.6%) - (12.5%)] = + 54.1%.

So we have to Δ *Δ (satisfaction from life)* value of + 54.1%.

Let us find now the value of Δ (Happiness). We have:

Δ (Happiness) = [(Very happy+ quite happy) - (Not at all happy+/ Not happy] = [(76.0%) - (5.2%)] = + 70.8%.

So we have to Δ (Happiness) value of + 70.8%.

We have to value the ISW in the family:

ISW (family) = [Δ (life satisfaction) + Δ (Happiness)] / 2 =

[+ 54.1% + 70.8%] / 2 = + 124.9% / 2 = + 62.45%

So we have to ISW (family) = **+ 62.45%**

Margin required is:

ISW (family) = + 62.45% - ISW (street) = + 19.6% = + 42.85%

As the margin it will be [- 42.85%, + 42.85%]. From this margin will be "expected" statistical error, that inserts the sample of size (for sampling with size 100 units) is + / - 10.6%. We will have: (- 42.85%) - (- 10.6%) = - 32.25% and (+ 42.85%) - (+ 10.6%) = + 32.25%.

So the margin remains **[- 32.25%, + 32.25%].**

From this margin will be "expected" the error that inserts quotas, which from the measurements made by the "parallel" survey, it appears that is given from the margin [-7.35%, + 7:35%].

We do "cutting"**: (- 32.25%) - (-7.35%) =- 24.9%** and

(+ 32.25%) - (+ 7:35%) = + 24.9%

So the error that inserts non consideration of anonymity of respondents, when we make delicate questions is:

[- 24.9%, + 24.9%].

CONCLUSIONS

From tables of frequencies, results that the differences between ISW values of responses to answers of analogue questions (on the road and in the family) form a segment, which has as the smallest margin -3.25% and the largest margin + 3.25%. From the smallest limits and the greatest limits, we should subtract the error that associated with systematic sampling depending on its size; Respectively statistical error is +/- 6.10% (for sampling the size 100 units).

Segment **[-7.35%, + 7:35%]** makes the proposal for the required margin of error that introduced quotas in the last link of sampling.

Also, the error that introduces non consideration of anonymity to respondents when making delicate question is:

[- 24.9%, + 24.9%].

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