

How To Set The CATI Call Scheduling System To Minimise The Risk Of High Total Non Response Rate

L'Impostazione del CATI Call Scheduling System per Ridurre il Rischio di Mancate Risposte Totali

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Riassunto: Obiettivo del lavoro è individuare degli standard di gestione del sistema di schedulazione delle chiamate per le indagini CATI presso individui e/o famiglie. In particolare, si cercherà di definire un “optimum” per il numero dei tentativi di contatto da effettuare sul singolo nominativo tenendo conto del vincolo di bilanciare il tasso di risposta atteso con il costo per intervista stabilito. Inoltre verrà analizzata la distribuzione dei contatti nella fasce orarie di rilevazione per cercare di delineare le strategie di gestione degli esiti provvisori che evitino quelle inefficienze che impatterebbero negativamente sulla produttività oraria del sistema.

Keywords: CATI surveys, CATI Call Scheduling System

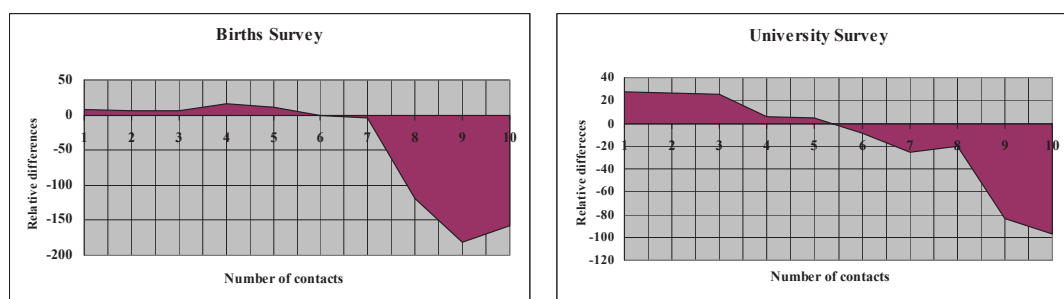
1. Introduction

The growing number of population CATI surveys carried out in Istat gave us the opportunity to try to determine standards for setting the parameters of the CATI Call scheduling system. Till now, the in-house development of the electronic questionnaire together with the design of the survey paper questionnaire have led to the definition of standards about the entire structure of the questionnaire (checks, skipping rules and layout) and of its questions (wording, answer categories, etc). Less attention has been paid to the definition of standards for the call management system which has instead a strong impact on the quality of data (response and non response rates) and on the survey budget (Weeks, 1988). The aim of this paper is to define call scheduling standards independent from the target population (households or individuals) and from the fieldwork time. For the analysis we chose three CATI surveys: 1) ‘University-to-work transition survey and perspective - 2004’; 2) ‘Sample Births Survey – 2004’; 3) ‘Violence against women – 2006’. All the electronic questionnaires have been developed using the Blaise software. Target populations as well as fieldwork time were different among these surveys: the first one was conducted among university graduates who took their degree in 2001 and the fieldwork was run from 7:30-9:30 pm. The second survey a sample of mothers of children born in 2003-04 were contacted from 5:30-21:30 pm. The last survey was run among female household members aged 16 to 70 and the fieldwork lasted from 9:00 am and to 9:00 pm. For comparison reasons we based the analysis only on the telephone contact results of eligible units of each survey.

2. The study carried out to define the call scheduling standards

One of the most important scheduling parameters is the max number of contacts per unit (Greenberg, 1990) which is established a priori in each survey according to its own characteristics and needs. It represents the number of times a sample unit has to be contacted before its substitution with another one. The first step of this analysis is to determine the optimal standard value for it, which allows to reach each sample unit keeping the response rate at the expected level and to avoid inefficiencies by those units that received too many calls without obtaining a positive contact result. For all the three surveys we analysed the relative percentage differences among the distributions of interviews and refusals per number of contacts. Results are shown in Figure 1.

Figure 1: *Distribution of relative percentage differences among interviews and refusals*



The optimal maximum value can be fixed in 6-7 contacts, after which the refusals are significantly much higher than interviews and the interviewers' productivity is lowered down with a negative influence on the survey's budget. For the 'Violence survey' this value ranges around 3-4 contacts probably because of the extremely delicate subject which led people to deny their cooperation as soon as the interview starts.

The second step of the study was to try to determine the best contact strategy to find out how to distribute the phone calls during the survey period. Results show that if the fieldwork is short (3-5 hours per day) different contacts per unit should be tried in different days in similar time slices instead that in different hours of a single day. If the fieldwork is large (more than 5 hours) more contacts can be made on a single day but with a time difference of at least 2 hours between each other; an upper limits for appointments during the same day should also be fixed (max 3-4 appointments per day).

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