



DATI ALLA MANO

I PODCAST



## LET'S TALK ABOUT THE CENSUS

After a very long history of ten-year intervals, the population and housing census has become permanent. Since when? Since 2018, October 2018 to be precise. But what does this adjective 'permanent' mean? Are we subject to a continuous count? No, the permanent work is that of Istat which, over the course of a year has its hands full with primary survey, secondary study, and dissemination of data.

I am Cristiana Conti and this is Dati alla mano (Data at Hand), a podcast by Istat, the National Institute of Statistics, where I work in the Directorate for Communication, Information, and Services to Citizens and Users. This initiative is part of a broader project to promote statistical culture.

In this episode, we will discover how and why the census in Italy has changed, what are its new aspects and advantages. And we will also take a look at what happens in other countries.

Once upon a time there was the population census. Oh yes, once upon a time because in Italy the first census dates back to 1861, that is, the year of the unification. Since then, the appointment has been every ten years. The Census was carried out regularly every ten years in years ending in 1. There were only two exceptions: it was not carried out in 1891 due to lack of funds and in 1941 due to the war. Initially, it was carried out by municipalities, then since Istat was founded - that is, in 1926, almost a hundred years ago - it became one of its main objectives. In 1931 for the first time punch card machines were introduced to process data, and in 1936 another exception was made, an attempt was made to start a five-year frequency - which, however, would not be continued - and another census was carried out... and thankfully so, given that for the next one, we had to wait until 1951 - as we said, in '41 the census was not carried out because the war prevented its implementation. But in '51, the housing census was added to the population census, and thus the pairing that still exists today was inaugurated: Population and Housing Census.

Moving closer to the present day, other innovations arrived: for example, in 1971, the translation of the questionnaire into German, and twenty years later, the translations became six, six different languages to be understood by all speakers present in the territory, because - I remind you - the census involves all people that are present in Italy, not just residents. And then, in 2011, Internet arrived, meaning the questionnaire could be filled out online. And then? And then the sequence stopped because the census changed its nature. No more ten-year frequency, no more mobilisation of hundreds of data surveyors across Italy. In 2018, the census became permanent; it is carried out every year. But unlike the censuses of the past, it does not involve everyone; instead, only a representative sample of us must fill out the questionnaire. But can we still speak of a census then? And how was such a radical change possible? We ask **Gerardo Gallo**, who is responsible for the population and housing census at Istat.

**Cristiana.** Hi Gerardo, welcome.

**Gerardo.** Thank you, hello everyone.

**C.** First of all, why did the Census change?

**G.** It changed to make the procedure more agile from all points of view, less burdensome for respondents and less costly overall, and then – crucially – to have detailed and updated data every year instead of every ten years.

**C.** And that's no small thing. But how did we move from the traditional census to the permanent one?

**G.** The transition was possible because we first developed a series of statistical registers: for individuals, places, work, education, and other thematic registers. We created them by utilising information we had previously acquired, and gradually enriched them with data from the administrative archives of various bodies. From these we can derive information that we integrate annually thanks to two sample-based primary surveys.

**C.** Why two surveys?

**G.** Because one involves a longer questionnaire and aims to fill in the missing information from the registers and which represent the variables on the socio-demographic characteristics of the population.

**C.** For example?

**G.** For example, qualifications obtained abroad: we do not have archive information, both regarding foreigners and Italians who grew up in other countries and then returned to Italy. What did they study? Through the sample survey – and the sample is much much larger than a 'standard' sample survey – we fill this gap.

**C.** Other gaps that can be filled?

**G.** I can mention several examples: information on housewives, or on those who live on incomes other than employment income, the phenomenon of commuting, the availability of ramps for disabled people in private buildings... there is no archive containing this information.

**C.** You mentioned two primary surveys....

**G.** Yes, the second is what we call areal, and it helps us to verify the quality of the population count obtained by integrating administrative data. It is the one we are modifying.... Currently, it is based on surveyors who are assigned a portion of territory to visit 'blindly' by administering a much shorter questionnaire

**C.** And how will it change?

**G.** It will probably become a triennial survey, no longer annual, with the aim of assessing the quality of the population count based on the so-called 'signs of life'.

**C.** Signs of life? What are they?

**G.** Administrative 'signs of life', of course, those that an individual leaves when acting in the territory: he requests a service, buys a house, receives contributions for a work activity (continuous or occasional), receives a pension or any other benefit, etc.

**C.** And is the aim always to verify the quality of the count?

**G.** Exactly. In this way, we verify any counting error and we can correct it with new deterministic rules.

**C.** Now I'll ask you a crucial question: given that a survey is sample-based, how census-like is the output that Istat actually produces?

**G.** It is census-like, I assure you, and not only because the sample is much larger than that of a standard sample survey – consider that in 2023 the census involved 1 million 46 000 households – but because of the integration between data collected in the field and data available in the registers. This is the strength.

**C.** The magic cross-linkage.

**G.** exactly, and thanks to the cross-linkage we continuously improve the registers, and from the registers we can obtain unprecedented information.

**C.** For example?

**G.** For example, the migratory history of Italians and foreigners, thanks to the cross-linkage between place of birth, current citizenship, and previous citizenship.

**C.** But then, since we have the registers, since we can do unprecedented cross-linkage... does it still make sense to carry out the census?

**G.** It certainly does! Only the census, thanks to the mix of register data and survey data, can give us information down to sub-municipality level... let's say neighbourhood level to give you an idea, even if it's not the correct definition... and consider that this is valuable information for focusing in detail on the territory. This is information that can become a guide for policy design and planning at a territorial level, to organise services...

**C.** Can you give me an example?

**G.** Think of a neighbourhood, a neighbourhood with a concentration of elderly people, pensioners and a decent average income. Then think of another where there are many people with a low level of education who are not working, perhaps with a migratory history behind them.

Clearly, the needs of these two districts are very, very different...

**C.** Certainly.

**G.** Think how useful it is to have, always at a district level, a snapshot of the distribution by sex and age, educational qualification levels, employment, types of housing – starting from the estimated year of construction, which is data not always available in the land registry...and which we must obtain from surveys.

**C.** Okay, I'd say the census is still useful.

**G.** And we must continue to improve it year by year, in order to achieve increasingly accurate information details.

**C.** But at the moment we still don't have very detailed information at the sub-municipality level from the permanent census.

**G.** We are working on it, they won't be long, trust me. Anyway, that's also why I'm telling you that we must continue to improve the system. The transition from the ten-year census to the permanent one was a revolution, but it is a huge work, I can assure you.

**C.** I don't find it hard to believe; but in your opinion, is the importance of participating clear to us citizens?

**G.** Yes, consider that in 2023 we had the highest response rate ever, a sign that there is an awareness on how important it is to participate.

**C.** And that the communication campaigns played their role! One last question: is data confidentiality always guaranteed?

**G.** Absolutely. As you know, it is guaranteed by law. The exclusively statistical use of the data we collect is the basis of the agreement between official statistics and respondents!

C. All clear, thank you Gerardo for being with us.

G. Thank you and see you next time.

Before interviewing Gerardo, I had wondered, how do other countries carry out their population census? So, when I met another Istat expert, **Donatella Zindato**, I asked her a few questions. Here are her answers, as I recorded them.

C. How many ways are there to carry out a census? And does anyone do it like us?

D. There are many ways to carry out a census now. Traditionally, it was a total field survey, every ten years. But for a few decades now, several countries have developed methods increasingly based on the use of administrative data. The census like ours, carried out annually by integrating register data with ad hoc surveys, I would say is almost unique. The most similar is probably that of Switzerland.

C. But are there still those who only carry out the primary survey?

D. Yes sure, in the world, so-called traditional censuses are the main solution – and even in those cases, there are innovations in survey techniques: from the use of tablets by surveyors to the online filling out of questionnaires – but in the UNECE area, which is the United Nations Economic Commission for Europe, comprising the EU, the Balkans, countries of the former Soviet Union, Turkey, North America, and Israel, the countries that carry out the so-called traditional census (but it is more appropriate to say based on a primary survey) are only one-third. These include the United Kingdom, Canada, the United States, France, Greece, Portugal, Romania, Bulgaria, Russia... even if each in its own way, they all carry out a census based exclusively on a primary survey.

C. What do you mean by 'in its own way'?

D. For example, consider France, which carries out a 'rolling census' over a five-year cycle: each year, it carries out a primary survey in a part of the territory of all municipalities above 10,000 inhabitants, accumulating data from the last five years annually. In smaller municipalities, however, the survey is carried out only once during the five-year period but is comprehensive. However, each census is unique because the methodology depends on the context.

C. What do you mean?

D. It depends on the availability and completeness of administrative data, the degree of digitalisation, and the attitude of the population. In general, countries that do not have a civil registry, and therefore no population register to rely on, use only the primary survey.

C. But are there also those who only use registers?

D. The Nordic countries, however, started the 'transition' back in the 1970s. In these countries, it cannot be considered even a census, at least as we usually think about it. Residents do not notice when the statistical institute produces the census data required by the European Union.

C. Are these the Scandinavian countries?

D. Yes, the first were Finland, Norway, Sweden, Denmark, and the Netherlands, which, however, integrates registers with data from the labour force survey, and now there are also Austria, Belgium, Iceland, Lithuania, Latvia, Slovenia...and further south Turkey and Spain...

C. So just us and the Swiss use a mix of register data integrated with field surveys?

D. No, no, many countries adopt a mixed approach. There are Germany, Luxembourg, Poland, the Czech Republic, Slovakia, several Balkan countries... consider that out of the 56 countries that are part of UNECE, 19 conduct the census by combining surveys and data from registers. Then, the methods for achieving this can vary.

**C.** An interesting overview. Thank you very much Donatella.

**D.** You're welcome, see you soon!

We have understood that different methods to carry out the population census are related to different contexts. And we have learned that it is a procedure in evolution; it has changed compared to the past and will change again because it will benefit from further innovations. And this is happening not only in Italy.

I am Cristiana Conti, and this was Dati alla mano (Data at Hand), a podcast from the National Institute of Statistics. This episode was produced with the support of Storielibere.fm. Continue to follow us on the Dati alla mano (Data at Hand) section of Istat.it and on your favourite listening app. Are there topics you would like to explore further? Write to me at [datiallamano@istat.it](mailto:datiallamano@istat.it). Gerardo Gallo, Donatella Zindato, and Manuela Bartolotta worked on this episode.