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Statistics Beyond 2020: challenges and risks

Giorgia Zaccaria

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In recent years, Official Statistics have had to face even broader challenges which could pave the way to a renewal of methodologies, technology, tools and its framework as a whole. In a rapidly changing world in which a data revolution is taking place thanks to the ICT development, the figure of the statistician is modifying as well.

In the academic environment- in which I study-, a new source of data is now being considered: *Big Data*. Big data can be a considerable source of statistical knowledge even though its use points out both positive challenges and benefits, in terms of the amount of new information, and not negligible risks, especially from a methodological point of view and likewise in terms of the loss of control over the statistical production. Nevertheless, given that the employment of this new source is grounded in the even bigger development of technologies, in my opinion, NSIs and universities ought to work together in order to put into practice up-to-date methods of analysis for this new kind of data.

Therefore, not to be overlooked is the risk of a more difficult interpretation of big data itself as a result of the broad meanings it can have and consequently the possibility to manipulate it. For this reason, a great achievement for a statistician is to have both digital and methodological skills, like those of a computer scientist, and multidisciplinary skills, like those in the economic and social fields, so as to take part in each process phase of the statistical "production"- although this word has to be re-examined with the big data's arrival, as for example the geospatial data or web data.

As a student close to my way in the labour market, I hope to have the possibility to enhance my skills in ICT thanks to the EMOS curriculum and to compare myself to the figure of the data scientist with whom to work together, both to avoid overlooking a more statistical standpoint and to enter into new disciplines with different languages. With regard to my experience, I believe that the university curriculum EMOS fosters the discussion between statisticians, who have different backgrounds, and it allows to enhance the multidisciplinary skills cited above and consequently to build professional profiles. Indeed, by virtue of this network of master programmes I have had the opportunity to take part in an international meeting like this and in international videoconferences, called *Webinar*, in which some current statistical problems, approaches and methods were discussed and new ideas could be depicted.

Thanks to these educational exchange opportunities a new well-rounded statistical figure could be developed to address the current methodological and computational issues.

From a societal point of view, it is important that the users themselves ought to be enabled to correctly interpret the information provided by the NSIs. On the one hand, they should have some *statistical skills*- indeed, many European countries have decided to introduce statistics in high school math programmes- and, on the other hand, NSIs should *prevent the data misuse* by the users (researchers, public opinion, journalists, citizens, decision makers and so forth), choosing information tools accessible to the entire population, as much friendly as possible- as also recommended by the United Nations General Assembly in the Principle 4 of the Fundamental Principles of Official Statistics. With reference to this latter perspective, one of the main goals of EMOS, stemmed from the official statistical system and in my opinion heavily achieved, is to make students aware of the standards, the regulations and the guidelines that a statistician must know to work in the official statistics field. In my experience in this curriculum, I have also the opportunity to examine in depth issues relating to the dissemination management, the production of official statistics documentation through the existing codes of practice, which could be useful to outline my professional profile and, as a citizen, to trust in the statistical apparatus.

Nowadays the main problem which heightens its crisis is the *lack of trust* in official statistics- and as a citizen and user, I can perceive it on my own experience in my community-, partly due to the sense that it cannot accurately represent the reality as

it is lived by citizens. This could lead to the even sharper parting amid public opinion and statistical agencies, and, therefore, to the *lack of attendance* in the traditional surveys and in official statistics as a whole, making inevitable the exploitation of alternative sources.

To avoid the spreading of these dreads an ongoing training and learning of the *statistical culture "at open doors"* is necessary, from the beginning of the statistical process to the end, in which citizens could run an active role, so as to let people realise the role of the important contribution they can offer. As a consequence, official statistics can be considered as a public good, which guarantees the right of a person to live in an informed society in which *better data means better lives*.

References

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