



## The role of Communication skills in the profile of modern Agricultural Statisticians

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DOI: 10.1481/icasVII.2016.h48b

### ABSTRACT

In the last few years the process of data statistical production in agricultural statistics in Poland was modernized. Data are collected exclusively with the use of electronic equipment - paper questionnaires are no longer in use, both for the obligatory reporting system, and for the sample surveys in private farms. The new techniques effected of diminishing the number of personal interviews (CAPI) and increasing the number of telephone interviews.

The new system of statistical production and data collection requires additional communication skills for the interviewers, such as:

- excellent knowledge of the subject matter i.e. the goal of the survey, basic information on agriculture in the surveyed area, basic information on a farm (if the farm was selected for other surveys)
- ability to establish contact with the farmer
- patience
- resistance to stress.

To improve the communication skills of the interviewers, several undertakings were initiated including professional trainings at the central and regional level, both for trainers and interviewers. E-learning has also been developed in order to enable improving the knowledge in the time preferred by employee.

As it was mentioned, the new techniques required both the professional knowledge and the use of modern technology. To increase quality and effectiveness of the interview, so called hints are commonly used in the IT application. In case of uncertainty the interviewer may click on the word and the definition appears. It helps the interviewer to go smoothly through the questionnaire.

There are also some other tools to help to communicate and collect the data:

- the announcing letter from the President of the Central Statistical Office sent to every holding, which was selected to the survey,
- the info line providing information and help for respondents,
- the organizational and methodological survey descriptions,
- promotion activities concerning statistics in general and statistical surveys in particular,
- improvement of IT tools.

Apparently, agricultural statisticians need to improve their communications skills in due to progressive specialization of employees, whose participate in - various trainings at the central and regional level. The trainings concern communication with media, finding the best way to sell the product, namely, agricultural statistics, and how to communicate with methodologists, IT specialists, survey coordinators and interviewers. The most important goal of these activities is to get the best result – high completeness and the best quality. To achieve this goal, except the skills the support of the technology is essential, hence the development of systems handling with metadata or new communication tools is essential. The other issue is presence of statistical institutions in social media, which requires engagement of statistician with entirely new competences.

**Keywords: communication, data collection, modern methods**

## INTRODUCTION

Each country, each economic group or political party, implementing its program functions through its inherent structure of the authorities. and management must have the appropriate resource information that provides greater rationality and effectiveness of its policies.

Fundamental importance of statistics in democratic societies is to provide all categories of users appropriate range of information. Democratic processes may be implemented by the public in an appropriate manner only if there are the conditions for monitoring the development of the society on the basis of reliable and objective information that reflects the realities and consequences of political decisions.

These two statements are fundamental to the statistics and show in fact that in order to implement posed and ambitious goals, should seek to ensure good communication between the general public and the statistics realizing its statutory tasks.

Both the definition of statistics and the scope of surveys have evolved over the centuries. While in the XVIII century statistics have been defined as "a word recently introduced to express an image or a brief description of some of the kingdom, county or municipality" (Encyclopedia Britannica third edition of 1797), in XIX century statistics was considered as science and incorporated as a section of the British Association for the Advancement of Science. The Royal Statistical Society was founded in 1834. Statistics was defined then as follows: "the facts relevant to humans, possible to present in the form of numbers, multiplied in sufficient quantity indicating the general laws".

Statistical data usually are collected during statistical surveys – either full (comprehensive) or sample, where the primary source of information is the man.

In the last years the idea of acquiring the data from administrative sources is widely promoted, which on the one hand aims to reduce the respondents burden in the times of rapid growth of

different surveys, inquiries, Gallup polls – conducted by telephone by institutions other than official statistics.

Official statistics is also updating the methods of data collection, using the CATI method more frequently in order to reduce the costs of statistical surveys. This enforces having adequate communication skills by statisticians to find a common language with various bodies, without which implementation of statistical surveys is impossible.

In the last years in Poland in agricultural statistics the breakthrough was noticed associated with the method of data collection. Due to the decision concerning resignation from the paper questionnaires the system of data collection on media information (internet, phone) was developed.

Paper questionnaires have been replaced by electronic application and hand-helds and tablets were introduced. This solutions forced the Polish statisticians other type of communication, primarily with IT people, but also with respondents who were accustomed to regular visits by interviewers.

## COMMUNICATION

Speaking about communication one have to think what are so called target groups to which we want to reach with statistical information.

The main target groups, which Polish statistics communicates have been defined taking into consideration strategic goals of the European Union in the scope of dissemination and communication expressed in the Regulation of the European Parliament and the Council (EU) 99/2013 of 15 January 2013 on the European statistical program 2013-2017 with further amendments (Goal 4.1) directions of communication improvement of statistics with environment indicated in „The ESS VISION 2020” prepared in the framework of the ESSC as well as based on the strategic communication goals of the Polish official statistics.

According to the above, in the Polish statistics following communication target groups have been distinguish among the external environment:

**Public sphere** (public administration, self-government administration, National Bank of Poland and other banks, finance and insurance institutions, justice and law enforcement, associations, organizations, foundations),

Business sphere (**enterprises, analysts in companies, economic self-government**)

Scientific-educational sphere (**research institutions, universities, schools**)

**Media** (press, radio, television, internet media, journalists)

**Foreign recipients** (institutional recipients, international organizations, social organizations, statistical institutions, individual persons, students)

**Individuals** – persons looking for statistical information (neither connected with research activity nor with professional work)

**Entities connected with statistical services** (program partners of the CSO, engaged in the preparation and realization of the statistical program of official statistics, data providers from the information systems of public administration, respondents, candidates for the job)

From the point of view of agricultural statistics, especially having in mind the use of modern methods of data collection, specialization of farms, specific and ever-increasing needs of international organizations (FAO, OECD), the European Commission and national users of statistical data, the presented above breakdown of target groups is not entirely justified.

Modern agricultural statistician responsible for statistical surveys has to have broad skills depending the level (long list of diversified skills):

- inside the office – (interdisciplinary) with people from other departments and especially with the census people - if different from current statistical surveys and with the IT people, who play bigger and bigger role in statistical surveys,
- outside the office - with the field staff – interviewers, experts, employees from local governments supporting statisticians,
- respondents = farmers (thanks to them we are engaged in such fascinating area as agriculture) and farmers' organizations – to persuade them to provide the data because they are important also for them,
- stakeholders in the Ministry of Agriculture – to have an influence on the final shape of the legal acts significant for statistics (decreasing the respondents and statisticians' burden), here sociological skills are very important to avoid situation, they push us to do, what we do not want to do,
- owners of administrative data – to be allowed to get administrative data comparable and on time to be useful for statistics, with definitions compatible to those used in statistics and ensured good quality,
- media - how to interpret statistical data and phenomena, how to analyze them,
- among statisticians – exchange of experience in professional statistical journals,
- scientific environment – more and more frequently demanding anonymized individual data for in depth analyses.

What kind of activities from the statistical office should be undertaken to meet this objectives?

Effective communication is based on the principle of "I know who I'm talking to - I'm talking the language attractive and understandable to the recipient". Knowledge of the target groups is the basis of effective communication. Well-described group determine not only the type of message that should be addressed to them, the type of channel through which the message should reach them, the level of complexity of the language in which the message should be formulated, as well as the level of interest led to their message.

The overall message addressed to all recipients should contain the same idea, however the message addressed to each of the groups should be formulated taking into account its specific expectations, the level of interest and the possibilities of perception. At the same time for the addressees of communication relevant tools should be used to efficiently deliver the desired information. When planning communication activities for specific target groups, their expectations in terms of messages and proper, most effective tools of communication should be redefined.

In general we should know the background of the recipients of our information. Different communication skills are required to talk with scientific environment or with the stakeholders and different with farmers or farmers organizations as our respondents.

#### The skills inside the office.

Communication with the IT people is very important. More and more of statistical surveys is conducted using the electronic tools, like the internet (CAWI), tablets for interviewers (CAPI) or computer connected with the telephone (CATI). For this methods of data collection special applications must be developed, friendly both for respondents and interviewers. Ideal situation is if IT specialists know a little agriculture and agriculture statisticians know a little programming. This enables communication between both parties and ensure good results – good quality of the survey

thanks to the simple and clear definitions and questions, rules of navigation through the application according to the specified paths, instructions how to handle errors. Apart from the questionnaire itself, the system of managing the survey is very important – among others tracking the progress of survey, completeness and quality of questions in the operational database.

All the needs of agriculture statisticians must be forwarded to the IT specialists in a concrete way, having in mind the expected results. When planning such statistical survey like farm structure survey, during the planning phase detailed analyses should be made concerning:

- EU legal acts from the point of view of characteristics required in the agricultural surveys,
- the needs of domestic users,
- EU and national definitions and their comparability,
- National and Eurostat validation rules,
- accessibility and quality of administrative sources,
- links between the questionnaire sections,
- experience from previous surveys (sequence of particular sections, sequence of questions, the form and the content of questions, mistakes that occurred most often),
- range values for quantitative characteristics,
- data collection methods.

This is only the example, that modern technology actually makes it easier to work, but requires additional knowledge.

A very important is communication with the people responsible for the census in case they are different units or organizations. All measures must be ensured to keep the comparability of results obtained in the census and other statistical surveys.

#### Communication with the field staff – regional statistical offices.

This is very important for agriculture statisticians, because the success – good quality with a high response rate survey results depend from the field services. Regular meetings with them builds the team, allows for exchange of experience in different regions, discuss problems, and to build good relationship, which help later in daily work. In the case of Poland regular trainings are organized for statisticians from regional statistical offices responsible for field work. They are trained both in the merit subject of the survey (refreshing existing rules and definitions, discussing in depth the new elements of the survey) and the technical elements – the electronic questionnaire – how to go through the application, how to treat the hard or discretionary errors, how to track and analyze the survey progress and results in a special module. In addition for communication among interviewers, supervisors, specialists from the headquarter and other involved in statistical survey a special tool was developed called JIRA, to put questions, announce problems and get the same answers at the same time.

Every year interviewers from the regional statistical offices in Poland are trained to extend and consolidate the knowledge of the legal basis of the functioning of public statistics, sampling methods and construction of the questionnaire. They also improve their interpersonal skills and how to cope with difficult situations. Statisticians can also use the e-learning program.

#### Communication with the field staff – experts.

Agriculture is a very broad area of statistics, depending on meteorological and economic conditions. It is good to have first-hand information. Having this in mind in Poland special contracts are signed with field experts recruiting from agriculture advisory extensions. They provide monthly information on different issues during the year and in the vegetation season – adequate information on the area and expected yields of individual crops.

The main objective of the communication activities is to convince potential experts about the nature of their participation in the project as well as that they constitute the important source of

information on agriculture. They usually know the neighborhood, farmers and general condition of the area under their responsibility, so talking to farmers they also represent agricultural statistics – in a way.

Important part of activity of agriculture statisticians is participation in a different local conferences and fests organized for farmers, when statistical information are distributed. In some of such occasions farmers have had opportunity to provide data on a special computer for the currently conducted survey.

### Respondents

Respondents are very important target group, from the communication point of view. Due to the need to maximize the percentage of completed reports and obtain the best quality data, official statistics should make every effort to ensure the proper way to communicate with respondents. The main objective of the communication is to convince the respondents about the importance of their participation in the survey and to convince them that they are the only source of information. It is also important to emphasize the fact that the information gathered by the survey will be used only to develop aggregate information and analysis, and individual data will not be available anywhere. Agriculture respondents in Poland can be divided into 2 specific groups, which are the subject of various communication activities: natural persons' farms as well as legal persons and organizational units without legal personality, which carry out the reporting obligation.

Towards physical persons – individual farmers, such activities like sending an invitation letter, explaining the goal of the survey, the ways and technics of data collection, information concerning statistical interviewers and possibilities of confirming their identity, statistical confidentiality and access to the survey results. If the e-mail address is known, respondent receives a message concerning participation in statistical survey.

On the website the questionnaires are placed informing on the frequency of data collection, allowing for earlier acquainted with the scope of the collected data, with the possibility of print. For all farmers there is also possibility for self-filling the questionnaire. In addition a special hotline (info) runs during the survey. All must be sure that statistical confidentiality will be kept.

In case of farm structure survey or agricultural census, posters are placed in the municipal offices, branch offices of the paying agencies and other visible places in the rural areas, as well as broadcast at local TV or radio are held to promote the survey and attract farmers to provide information.

They are a very important communication channels with farmers building the trust between both interested parties.

Towards legal persons and organizational units without legal personality, which carry out the reporting obligation similar activities are undertaken like placing on the CSO web site information concerning all surveys during the year as well as the questionnaires, to allow prior acquainted with the scope of the study. Electronic tool to provide the data, together with the information concerning login, account activation, contact person in case of unforeseen problems is also provided as well as discussion forum where comments can be submitted.

Stakeholders. Central administration and local government is a very important partner in the process of communication of Polish official statistics, including agriculture statistics. Communication actions that are taken to this group can be divided into activities addressed to the data users, data providers (including their role of owners of administrative registers) as well as the partners having an influence on the content and realization of the statistical survey program.

Policy makers' need reliable information to support decisions, so they have to be ensured, they can use statistics as reliable, evidence-based and an unbiased picture. This message must go from



statistics, and in my opinion, the process of building of the statistical survey program, involvement in the consultation process of elaboration of European regulations concerning statistics allows for further understanding and cooperation. On the other hand statisticians, for good and effective communication, should have the knowledge on the Common Agriculture Policy (goals, priorities, mechanisms, implementation and evaluation) to collect and provide comparable data on agriculture and its structure in the country and at the European level.

In case of media and journalists statisticians should pay a special attention. This group of data users is crucial for the image of statistics, because they have the direct influence on other recipients of statistical information. Media are both the recipient of the message, as well as generate the same messages in the mass media – newspapers, radio, TV and in the internet (including social media). Message must be concrete, clear and on time. Quality of statement is very important – writing articles is perhaps less stressful, but personal participation in the radio or television broadcast reinforces the message. The form of communication is conducted in different ways – like press conferences, briefings, short messages in a paper form, interviews etc.

On the other hand statisticians should not only provide information to journalists, but also undertake an effort to improve the statistical literacy among them for better interpretation of statistical data and phenomena.

Scientific environment. Publications with in-depth analyses are elaborated together with and for researchers. In the process of bilateral consultation on the scope of statistical program, they have a contribution to the surveys conducted by official statistics. They also use the results generated by statistics. The new, modern forms of data presentation, vizualization and dissemination makes it possible that researchers can make their own calculations. Close contacts with researchers are important – we invite them to provide lectures at statistical conferences and statisticians are invited on scientific conferences to explain methodology, the process of data production, present the data and express professional skills. Among statisticians we usually share our experience in professional journals.

## **SUMMING-UP - CHALLENGES**

To meet all requirements of contemporary statistics, statisticians are the subject to a constant process of training, improving their knowledge. In today's complex production process of statistics and their dissemination, agriculture statisticians need to improve ways to "reach out" to farmers (respondents) who are specific and increasingly demanding social group, as well as effectively communicate with owners of administrative registers, providers and recipients of statistical data.

Communication skills, as it was mentioned earlier are crucial for identification of information needs of data users and ability to respond flexibly to their needs in terms of survey topics, to attract the forms of data presentation with the use of modern communication channels as well as building partnership with data users.

Elaborated and published by Eurostat document “Digital Communication, User analytics and Innovative products” (ESS.VIP DIGICOM) provides information and show the new challenges. Underlines, that users’ needs are crucial and the European Statistical System should be flexible and responsive to them. The project will have a parallel approach – on one hand it will improve the methods for gaining insight into unmet needs of current and future users and on the other hand actually developing the innovative solutions meeting those needs.

Indicated priorities – tasks to perform in the near future will require new or improved communication skills from statisticians, including agriculture statisticians, who in many cases are pioneers in applying and implementing new solutions.

In the modern world, the comprehensive knowledge and interpersonal skills are as important as professional knowledge. In our work as agriculture statisticians, we communicate daily on different levels and in different ranges, using not only face to face talks but also phone calls, e-mails etc. We undertake decisions, we forward information and we perform commands. One should not forget, that some forms of communication arise from performed functions, therefore profiling contacts and improvement of communication skills is formed in a natural way.