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STATISTICAL DATA CONFIDENTIALITY

Supporting paper submitted by the National Statistical Committee of the Kyrgyz Republic¹

**I. IMPORTANCE OF STATISTICAL DATA CONFIDENTIALITY FOR
STATISTICAL OFFICES**

1. All statistical offices of transition countries admit that the protection of statistical data is important. Ensuring primary data confidentiality is one of the basic principles of official statistics adopted by the Statistical Commission of UN in 1994. Under the democratization of society, statistical data confidentiality becomes a basic principle of cooperation between statisticians and the public, i.e. statistical data providers.
2. There are two main objectives in ensuring primary data confidentiality: firstly, protection of privacy and non-disclosure of state and commercial secrecy; and secondly, strengthening the confidence of users in official statistics.
3. Kyrgyzstan was confronted with the problem of data confidentiality only in the '90s, unlike western countries who have been dealing with the problem since the '80s and even the '70s. For Kyrgyzstan, on the one hand this was due to economic, social and legislative changes, and on the other hand it was due to the development of information technologies and communication, increased use of personal computers, databases and networks. At present, statistical offices are not under the same pressure to present microdata as is the case in western countries. Nevertheless, one can suppose that as the technologies and markets develop, the demand for more detailed data will also increase.

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4. The Population Census of 1999 and the Agricultural Census, which is being conducted at the present time, may draw increased attention to the problem of data confidentiality. Such vast information collection as takes place during the census inevitably causes public concern about confidentiality. At the same time, the census is a unique opportunity to discuss the issues of confidentiality on the national level, to reconsider the principles of data confidentiality protection, to evaluate public opinion about data confidentiality and to prove that statistical offices fulfil a promise to protect confidential data.

5. Each country solves the problem of applying the principle of data confidentiality in its own way. This paper outlines the main aspects of application of the confidentiality principle and problems deriving from it.

II. LEGAL SETTING

6. In recent years, more attention has been paid to all aspects of confidentiality, perhaps primarily to the legal and administrative aspects. Obviously, the principle of confidentiality can be implemented through the strengthening of the legal basis. In accordance with the law, the State Statistical Service of the Kyrgyz Republic cooperates with data providers and data users.

The Law of the Kyrgyz Republic "On State Statistics" regulates rights and liabilities not only of those who collect, process and publish statistical data, but also of those who submit and use statistical data.

7. Thus, the Law guarantees the confidentiality of data provided by legal and physical entities. In accordance with the Law, statistical offices at all levels of the Republic are responsible for the disclosure of commercial and state secrecy, as well as individual information. At the same time, the Law determines rights and duties of persons submitting primary information to statistical services.

8. Another legislative act of the Kyrgyz Republic, i.e. the Code on Administrative Responsibility, regulates rights and duties of those who are involved in the production of statistical information. Observance of data confidentiality is one of the fundamental principles of the Code on Professional Ethics of Civil Servants adopted in the system of state statistics of the Republic.

9. Other legislative acts in the field of official statistics also contain the principle of confidentiality. These legislative acts are the Laws of the Kyrgyz Republic "On Population Census" and "On Agricultural Census". These laws guarantee the confidentiality of individual data obtained from censuses. Publication of summary results only in an aggregated type avoids the violation of constitutional rights and freedom of individuals.

10. The Law on Statistics guarantees the principle of confidentiality, but legislative acts of other institutions contradict the Law on Statistics. Such legislative acts oblige statistical offices to provide individual and confidential data to other institutions. That is why it is extremely important to coordinate the law-making process in different fields and institutions. Such a problem exists in connection with the Antimonopoly Service, which requests data on monopoly enterprises with some statistical indicators.

III. GENERAL POLICY OF STATISTICAL OFFICES IN THE FIELD OF CONFIDENTIALITY

11. Some special issues of general policy in the field of data confidentiality of state statistical services are being studied. These issues are access to primary data, and study of public opinion. Statistical offices better understand the importance of the position of the public and the respondents in regard to statistical data confidentiality. To strengthen confidence in state statistics, individuals have been informed about the confidentiality of primary data. All types of statistical reporting documents and questionnaires contain a reference to the corresponding article of the Law on State Statistics.

12. To encourage the participation of households in surveys and increase their interest in providing reliable information, the National Statistical Committee uses material incentives and guarantees the confidentiality of the obtained information. At the same time, the National Statistical Committee carries out information exercises with the public, providing information on the objectives and importance of conducting surveys. This results in a high response rate (the share of those who refuse to respond to surveys is valued at nearly 1-1,5% in a year). The statistical data collected on citizens are used only in aggregate or anonymous form, with no indication which could be used to identify individuals. Primary data on private individuals and families may not be published without their consent.

13. Access to impersonal primary data can be granted to research centers only for research purposes, as well as to Government institutions, fiscal and other state authorities in particular cases. Consideration of any data on enterprises as exclusively confidential may result in problems when we distribute such data. A certain company is often the only, or one of the few, producers of a certain product. This problem exists in the Kyrgyz Republic because selected sectors of the economy are represented only by a few enterprises.

14. Due to the lack of special software to protect data confidentiality, we use our own software or protect data manually. We recode data into wide categories, displace them and implement micro-aggregation. Special measures on data protection must be taken in the transmission of primary data through software networks. In recent years, on-line data collection has increased. Distribution of data through software networks is increasing.

15. Within the framework of technical and technological policy, the National Statistical Committee ensures the protection of statistical data from unauthorized access. The data on local networks can only be accessed by personal passwords. The software PROXY-Server was installed to protect the local (internal) network from external users.

IV. MEASURES TO PROTECT CONFIDENTIAL DATA

16. The most simple way to avoid the violation of data confidentiality is not to give microdata to users. Administrative and organizational measures are the main means of confidentiality protection, together with general measures and only special staff have access to confidential data.

17. Other measures frequently taken are access under controlled conditions, and access to data only by researchers whose names appear in contracts. The person storing the data is responsible for the provision of its confidentiality. In many cases, third parties must define the reason for wishing to access data, and statistical offices may refuse to grant access to primary data.

V. MAIN PROBLEMS OF OBSERVING THE CONFIDENTIALITY PRINCIPLE

18. There are certain problems attached to the application of the principle of confidentiality. One of the fields requiring special measures to be taken to protect the data is data transmission through software networks, since the number of collected and distributed data through software networks is increasing. Most users, especially from governmental and political authorities, suppose that “access to information” means access to individual data as well. The reason for this is that users do not correctly understand the principle of confidentiality in statistics and why one should observe it. As a result, they request microdata on enterprises from statistical offices.

19. It is important that users, especially civil servants, understand clearly what “confidentiality” means. In this context, the organization of an explanatory campaign of statistical data confidentiality through different seminars and conferences can be an important step in solving this problem.

20. Data storage and transmission problems are also important. Nowadays, with the growing use of the internet, the problem of protection of data from unauthorized access and provision of data confidentiality is increasingly valid. The situation is worse in regions of the country where the available premises and technical tools can not provide proper storage of confidential data. Accordingly, this also concerns electronic data transmission from regional statistical offices to the central statistical office.

VI. CHALLENGES FOR THE FUTURE

21. Work carried out to ensure data confidentiality can not be immediate. With the increase in demand for information, and new technologies of data transmission and reception, the necessity to protect individual statistical data will increase and that is why the principles and methods of data confidentiality provision must be improved on a continual basis.

22. One of the important issues that must be solved is staff training on confidentiality and conduction of a single technical policy, organization and coordination of work regarding statistical data collection. Technical assistance is needed in all spheres (methodology, organization, software provision, training), but the most frequently noted problems are software provision and staff training.

23. Training and re-training of staff is a general problem in all fields of statistics. Salaries in statistical offices are not comparable to wages of employees working in the private sector and that is why statistical offices have to look for other methods of keeping highly qualified staff (promotion, interesting work, etc.).

24. As for confidentiality, especially mathematical methods and software provision for these purposes, we can say that it is a relatively new direction of work in transition countries. An additional difficulty is the lack of necessary knowledge in the country and the only way to overcome this difficulty is to recruit foreign experts to train our staff.

25. Attempts to hack the networks of the National Statistical Committee or to intercept data flows between statistical offices and data providers are not a big problem in the Kyrgyz Republic. This situation will probably change and that is why more attention should be paid to data protection from hackers. We need mathematical methods of data protection when we transmit the data through software networks and better software to identify attempts to hack and to protect stored data. To solve the above-mentioned problems, we are especially interested in recommendations on and appropriate instruction in practical aspects of data confidentiality protection.