

STATISTICAL IN-SERVICE TRAINING OF CHINA UNDER TRANSITION OF ECONOMIC SYSTEM

Wang Jili and Li Yi, Statistical Education Center,
State Statistical Bureau, People's Republic of China.

This paper briefly describes the current situation of statistical in-service training in China. It is under reforming in order to meet the needs from the developments of market economic construction and the statistical work.

BACKGROUND

At present, the Chinese economic system is under transition from the central planning to market-oriented, so are the statistical work and the statistical education. There are 3 million statisticians in China. Among them, 80,000 are working at the statistical bureaus of national, provincial, prefectural and county governments which form the governmental statistical system. In 1986, the Statistical Training Center (its name was changed as the Statistical Education Center in 1996) was set up under the State Statistical Bureau (SSB). Its major responsibilities include:

- planning and coordinating the statistical education and training nationwide.
- Organizing statistical TV and correspondence education.
- Editing and Making various audio-visual tapes for statistical training.
- Introducing foreign intelligence.
- Macro-management of the statistical education in the universities and schools offering statistical courses.
- Management of the Xi'an Statistical College and the Sichuan Statistical School directly under SSB.
- Coordinating the compilation and evaluation of statistical teaching materials nationwide.

Statistical Education Centers are also established in the provincial statistical bureaus, and there are offices and full-time staff at the prefectural and county statistical bureaus responsible for statistical training. In the end of 1997, the Training Institute of the State Statistical Bureau was established. Its predecessor was the Chinese Television and Correspondence College of Statistics, established in 1985. The main task of the college is

to offer formal education and professional training for statisticians from throughout the country.

THE REFORM OF STATISTICAL WORK

Since 1992, the statistical work of China has been under rapid change, specially on the following aspects:

1. The reform of the accounting system. In 1993, the State Statistical Bureau decided to adopt the SNA recommended by the United Nations' Statistical Commission as the macro accounting system, replaced the MPS that SSB has been using since 1950s. This is a very important reform of statistics in China. The new system fits both China's condition and international standards and norms. State Statistical Bureau has reformed the survey indicators so as to meet the needs of the macro accounting.
2. The reform of the survey methodology. Under the central planning economic system, most of the statistical data are collected through hierarchically reporting system, which results in the timeliness and accuracy badly influenced under the market-oriented economic system. SSB decided to develop a new system combining periodical census with sampling survey approaches, therefore to ensure the timeliness and accuracy of data. The reform of statistical methodology has been laid as one of the important issues in the *Outlines of National Statistical Reform and Modernization 1996-2000* formulated by the State Statistical Bureau.
3. The needs for statistical data from the government, enterprises and public have been increasing greatly. They need not only general quantitative data, but also the combination of quantitative, qualitative and systematic analysis; not only the indicators of accumulation totals, but also the structural data; not only the statistics for the past, but also the analysis and prediction for the present and future, etc.

THE CURRENT SITUATION OF THE STATISTICIANS IN CHINA

The State Statistical Bureau has been paying much attention on the statistical training and the Statistical Education Center of SSB has carried out various training programs since 1990, improved the cultural levels and the knowledge structure of the

statisticians significantly, but the professional quality of the statisticians of China still can not meet the needs of the reform of the economic system and the development of the statistical modernization. The professional quality of statisticians cannot meet the needs of the above requirements.

1. Their survey skills need to be strengthened. The statisticians are used to the hierarchically reporting system, which is a complete survey. The Statistical Bureaus at the national and provincial levels are lack of the professional backbones who can skillfully design and organize sampling survey. Most of the statisticians are not familiar with the survey and interview skills under market economy, neither the edit, imputation and analysis of missing data and outliers.
2. Their abilities in building up the models to analyze the data by using the modern statistical methodologies need to be improved further. Particularly in provinces, most statistical analysis reports are descriptive and lack of in-depth research of economic relations and forecast of economic development.
3. The computing skills need to be enhanced. Many statisticians, particularly in root units, are not familiar with the general statistical software packages such as SAS, SPSS.
4. Their knowledge on economics needs to be updated. Most statisticians attended universities and colleges in the times of central planning and their knowledge are out of date.

THE DEVELOPMENT STRATEGIES FOR STATISTICAL TRAINING

1. Promoting the understanding of the importance of statistical education. In 1995, SSB drew up two important documents, *Decision on Strengthening the Statistical Education and Development Outlines for Statistical Education 1996-2000*. In 1997, the State Ministry of Personal Affairs and State Statistical Bureau jointly formulated *Decision on Statistical Continuing Education*. All these documents emphasize the importance of statistical education and stipulate that all statisticians must participate in statistical professional training and the continuing education. Based on these documents, the Statistical Education Center of SSB works out the annual training programs, stipulates the uniform standards and professional norms for statistical training.

2. Reforming the statistical curricula and updating the training contents. The courses should be emphasized are Macro- and Micro-Economics, Sampling Survey, Techniques of Statistical Analysis, System of National Accounts, Principle of Enterprise Accounting, Computer Skills and SAS, etc.. In order to update the teaching contents, we have translated and published a series books of Contemporary Textbooks and Monographs in Statistics of Foreign Countries, which will be very helpful for the statisticians, teachers and students in statistics.
3. Conducting various large scale remote training by using TV and audio-visual technologies. At present, all the statisticians are required to participate in the training of Survey Skills, Continuing Education for Statisticians offering courses of Principle of Computer Skills and SAS, Enterprise Accounting, Sampling Survey, Macro-economic Statistical Analysis, and Statistics for Enterprise Management, and many statisticians get their diplomas through on-job education. The TV and AV technologies play important roles in the statistical training in China Because of the huge number of statisticians to be trained and the unbalanced development of economic and culture in different regions (good teachers are not available and the teaching facilities are backward in some less developed provinces and regions.)
4. Short-term training. The Statistical Education Center provides annual training programs for senior statisticians, the directors of the provincial and prefectural statistical bureaus. Both of the training emphasize the theoretical statistics and the practice of statistical work so as to provide the participants up-to-date overview of the development of statistics and statistical work in the country and abroad. Courses are given by the instructors with academic backgrounds and those with rich practical experience. Besides, the Center offers short training courses on special topics such as Time Series, Seminar on Sampling Survey, Exploratory Data Analysis, Seminar on Poverty, etc.
5. Selecting young statisticians to attend the Master and Ph. D programs in universities and colleges in the country and abroad. We started a project of Human Resource last year with objective to train a number of trans-century staff with high quality who have good understanding of the new developments of statistical and economical theory and practice.

6. We are studying to set up a new system of “long-distance education” by Multimedia Technology, Computers and the Internet. The first step is to establish a network connecting the Statistical Education Centers of the National and Provincial levels.