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Training of Expert Statisticians: Some Experience from the Czech Republic

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Introduction

Training and professional growth of experts belong to the most important and yet challenging tasks of the training centres or training sections of the national statistical institutions.

Motto: Human is not born with the knowledge of statistics. Human has to be educated.

A new employee of the Statistical Office is not usually a ready-made statistician.

Prerequisites:

- Natural abilities, talent, personal and characteristic features
- Education – training and achievement

Statistician of the National Statistical Institute becomes an expert step by step, gradually.

- By acquiring his own experience in the process of solving assignments and by meeting other expert statisticians
- By mutual exchange of the information
- By solving complex projects, etc.

An expert has to constantly improve his/her qualification, which is important for his/her further professional growth.

It is obvious that the training section cannot be fully responsible for statistical knowledge of experts. An expert should be responsible for his/her statistical growth by himself/herself.

It actually means that young employees should be encouraged to extend their knowledge particularly in the field of statistics. They should become members of the project-solving teams where they can use their talent and skills and obtain necessary experience (learning by doing).

Accomplished project is the best drive for a new employee to increase his/her efforts. The training ranks among the key factors of the professional growth of statisticians. A young expert should be included into a team of experienced statisticians from whom he/she could learn, get experience and acquire work habits, inspiration.

International cooperation offers further opportunities for young experts in form of training courses, study visits and fellowships abroad (Eurostat, National Statistical Institutions).

Results and Discussions

1. Special Seminars on Statistics

One of the most important prerequisites of a successful expert career in the Statistical Office is obviously the knowledge of statistics. However – not all of the new employees come to the Office with an entry-level theoretical knowledge.

Thus the Czech Statistical Office organizes two-year Special Seminars on Statistics for university graduates who did not specialize in statistics. This course – Special Seminars on Statistics – is designed also for those employees who would like to enhance their statistical knowledge. The Czech Statistical Office cooperates with The University of Economics, Prague, for more than 40 years. Nowadays, the 22nd run of the Special Seminars on Statistics takes place.

Two generations of statisticians have already passed this course.

It is a regular two-year university training course where the graduates attend lectures, write seminar assignments, gain credits and pass exams. At the end of the course of Special Seminars on Statistics the participants are supposed to write the dissertation paper. Finally, there is a graduation ceremony, which takes place at The University of Economics, Prague. A study program contains the total of 384 hours of classes divided into four terms. Instructions proceed in weekly workshops, i.e. 32 hours of classes. During each term there are three weekly workshops. Altogether there are 12 weekly workshops.

Workshops are organized outside of the Czech Statistical Office, in the training centre by boarding system (where meals and accommodation for the participants of the course are provided). The aim is to have a room for lectures, undisturbed study and statistical discussions. The main reason is to eliminate disturbances from the outside world.

There are 15-20 participants in each run, which makes up a study group. Special Seminars on Statistics are set mainly for the Czech Statistical Office employees, however, we also enable employees from other central authorities of the public administration to take part. Sporadically, there is a private person or an employee from the commercial sector who is interested in this course.

The tuition and boarding are free of charge for the employees of the Czech Statistical Office. Other participants (or better to say – their employers) have to pay both for tuition and boarding.

The study program (see Picture 1 below) has been updated several times during recent years. It used to be adjusted to the requirements for the statistics.

The most recent study program is as follow:

Study program of Special Seminars on Statistics (see Picture1 below)

Four-terms study program set for university graduates in 2007-2009

Retraining Program

Special Study Program,

22nd Run:

Subject	Hours	Term			
		1	2	3	4
A. General Knowledge					
1. General Economics	24	24+			
2. Lawmaking in Statistics	8		8		
B. Basics					
1. Mathematics	24	24+			
2. General Statistics	32	32+			
3. Statistics Survey	16	16			
4. Economic and Social Statistics	56		56+		
5. Probability and Statistical Induction	32		32+		
6. Spatial Comparison in Social – Economic Statistics	16			16	
C. Special Subjects					
1. Computational Statistics I	16			16	
2. National Accounts	20			20+	
3. Time Series	32				32+
4. Sample Surveys – Theory and Practice	24				24+
5. Macroeconomics and Branch Analysis	24			24	
6. Computational Statistics II	24				24
Seminar I	20			20	24
Dissertation Assignment Seminar	16				16
Total	384	96	96	96	96
Credits Total	8	1	1	4	2
Exams Total	8	3	2	1	2

Picture1: Study program of Special Seminars in Statistics 2007-2009

Note: Sign + means exam, otherwise it is credit.

The Czech Statistical Office carried out the survey few years ago to follow up the job placement of the participants of the course of Special Seminars on Statistics. It has appeared that most of them work at managerial positions, i.e. Head of the Section or they belong to the Senior Statisticians of the Czech Statistical Office.

2. Training Plans and Career Plans of Employee Development

The top management of the Czech Statistical Office realize how important the training for the staff is. This issue is taken seriously and carefully.

In 2004, the Czech Statistical Office implemented the **Annual Evaluation Talks** with their employees. There are work assignments, projects and targets for individual employees but also the training aims as well. This practice is important for planning the further professional growth of the statisticians. In the process of well-prepared Evaluation Talk, it is possible to correctly identify the development needs and personal job interest issues of an individual employee as well. This method enables to motivate him/her for further training development. Special attention is paid to expert statisticians as they can make up their mind which way to go in the development of their training needs. Time interval is at least one year. Training needs are mostly set in longer time period (especially if an employee is included into career plan, or if he/she registers in Special Seminars of Statistics Program).

In 2006, the top management in the Czech Statistical Office approved **Principles of Career Development of the Employees** in order to motivate their employees and monitor their training needs. There were defined career options – for employees, for experts and for managers. There is a rule that the Czech Statistical Office should find their statistician experts and managers from among its own staff. Then, they are trained in order to fulfil their assignments. However, each employee should have in mind that he/she is responsible for his/her career development himself/herself.

In 2007, the top management of the Czech Statistical Office approved another document – **System of Career Development of the Employees**. This document specifies selection and training needs of statistician experts and managers, as there are two routes: Expert Route and Manager Route.

First – superiors of selected employees recommended them for statistician expert route or manager route. Secondly, the Czech Statistical Office top management approved those selected employees. Training takes two years. Each of the statistician experts and managers included in System of Career Development follows his Personal Career Project.

This Personal Career Project has been prepared with the employee, his superior and the training section employee. There is a follow-up four times during a two year period, i.e. once in a half year. In February 2008 a pilot run of a career training was launched. Now – there are 13 classified employees as statistician experts and 4 employees as managers.

3. International Cooperation

An international cooperation remains the essential issue of the training. Let us point out that international conferences, training courses abroad, meetings and consultations are crucial for personal development of statistician experts. The Czech Statistical Office appreciates that the European Statistical System (ESS) has paid attention to the training of the statisticians. It is gratifying that ESS strives to improve the training process as well.

Czech participants of the training courses abroad organized by the European Statistical Training Program (ESTP) highly appreciate their high standard.

4. Evaluation of the Training Process

Training of the employees in the Czech Statistical Office is evaluated on a regular basis and the results are shown to the top management of the Office. Evaluation process is carried out in several steps:

1. After the course – all the participants of the course fill in the evaluation sheets
2. After the course – the lecturer/s is asked about the course (if they encounter difficulties during the course, etc.)
3. Annually – the directors of the departments in the Czech Statistical Office are asked if training requirements of their department have been met. The directors are asked also if the results of the training have shown in the working process. And not least – if they have some questions and new requirements.

The results of evaluation process are continuously used for improvement of the training section outputs.

Conclusions

National statistical institutions are able to reach their accomplishments and provide quality results only with excellent statisticians. Thus the care for young expert statisticians and

continuous professional growth of all employees in expert positions belong to the key tasks of Human Resources management. It is necessary to use all training instruments, new methods and ways of training and new e-technologies as well.
