

staff from industry simultaneously provides favourable prerequisites to efficient theoretical and practice-oriented full-time study courses. The agreement concluded between the Minister of Higher Education and the head of the State Central Statistical Office according to which no lecturer or professor in the field of accountancy and statistics will be appointed unless he or she has worked in practice at least for one year after taking his or her degree is a further contribution in this direction.

In addition to the main forms of advanced courses mentioned above, a number of universities and colleges provide special courses and courses dealing with a limited number of specific subjects, e.g. 1 or 2-week summer courses, including those for graduates of different fields and employments.

Another form of advanced courses consists in systematically promoting gifted specialists and key personnel enabling them to take a doctor's degree, viz. the next academic degree of a Dr.sc. The candidates are usually engaged in solving problems of research, which, as a rule, are dealt with at universities at the request of institutions engaged in practical work.

2.7 CONCLUDING REMARKS

The system of education, postgraduate studies and advanced courses in the field of accountancy and statistics is, as in other fields, constantly improved. Special importance is attached to the task of ensuring the necessary orientation towards further development based on the results of the scientific and technological revolution. Considering the experience gained in practice today, its theoretical generalisation as well as the cognitions of the future development of economic and social processes and the corresponding requirements of management and planning, special emphasis has to be placed on attaining the necessary lead for training and further education on the basis of the results achieved by the scientific and technological revolution (particularly computing techniques with all facilities of data transfer). This can only be ensured by a close co-operation of theorists and those working in practice. In this respect, special attention has to be devoted to the formation and steady improvement of a uniform series of textbooks containing supplementary special references. In the GDR scholars from institutions of higher education, experts from research institutions and senior officers from the State Central Statistical Office are actively engaged in this work.

CHAPTER 3

The Training of Statisticians in the United States and Canada

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3.1 BACKGROUND

3.1.1 *Demographic and Geographic Information*

The United States consists of 50 states of which 48, excluding Alaska and Hawaii, are contiguous. Government is hierarchical beginning with the central Federal Government responsible for international, national and interstate affairs, state governments concerned with state affairs, and county governments involved with county or district governance, followed by local, city or town, governments in the form of councils or commissions.

The population of the United States (1984 estimate) is listed as 235,100,000, with major recent population increases occurring in the southern tier of states. Distances are great in comparison with most countries, examples of road distances being New York City to Los Angeles, 2,790 miles (4,500 kms.), Boston to Seattle, 2,980 miles (4,810 kms.), and Chicago to New Orleans, 920 miles (1,480 kms.). Regional cultural differences exist but are decreasing with modern mobility and communications. Legal systems have variations from state to state and this is true also of state and local taxes. Living costs vary substantially from urban to rural areas and tend to be lowest in the South-east.

The situation in Canada is much like that in the United States and living standards are similar. The population of Canada (1983 estimate) is 24,880,000, with a major portion of the population urban and located within one hundred miles of Canada's southern border. Canada is the second largest country with a land area of 3,849,700 square miles (9,970,600 sq. kms.) and distances are somewhat greater than in the United States.

Canada is divided into 10 provinces and two sparsely settled northern territories. Administratively, with provinces rather than states, the governmental organisation is similar to that of the United States. The provinces have generally larger land areas than those of states, but tend to have similar population sizes. Both English and French are official languages.

3.1.2 *Educational Systems*

Public education at the primary and secondary levels is free in both the United States and Canada. The general structure of the public education

system is specified by the State or Province, with some general requirements specified by the Federal Government which provides a portion of the funding, particularly for special programs. The school systems are usually operated locally by counties, municipalities or school districts. A portion of the cost is borne by the State while the major source of local funding is derived from property taxes. Attendance is usually compulsory for ages 6 to 16. Some school systems include a public kindergarten and some include a thirteenth grade; all systems include grades 1 to 12. The organisation of school systems vary, examples being (i) elementary school, grades 1-8, high school, grades 9-12; elementary school, grades 1-4, middle school, grades 5-8, high school, grades 9-12; elementary school, grades 1-6, junior high school, grades 7-8; senior high school, grades 9-12.

Private and parochial schools exist and their prevalence varies geographically. In the northeast of the United States and in eastern Canada, some private schools have evolved from the model of the English 'public' schools. In other areas, private schools were founded to provide high quality education and sometimes special religious training. In general, tuition charges are made at private schools.

Graduation from high school is based on the attainment of passing grades in a prescribed number of courses. Some specified courses are required for graduation but considerable flexibility in choice of elective courses is permitted. The senior examinations are usually determined in individual schools, but some systems of state-wide or province-wide examinations exist. Canada tends to have somewhat more structured programs than the United States, but current US concerns for the quality of education, particularly in English, Science and Mathematics, is likely to bring change. College-bound students may need to select certain high-school courses to meet entrance requirements of some colleges and universities. Options exist in some high schools for more practical, 'technical' programs provided for students not intending to proceed to higher education.

The college and university system in the United States and Canada is diverse. The United States has both private and public institutions, the latter consisting of both state and municipal systems. In Canada, some of the colleges and universities are essentially provincial institutions, but are funded through Provincial and Federal grants with less direct public administration than in the United States. In the Province of Quebec, French may be the basic language of instruction. The systems of higher education range from junior or community colleges, usually two-year colleges that also provide community continuing education programs, through four-year colleges to universities offering advanced degree programs in many disciplines. In the United States the basic funding for state universities comes from the State. Federal funding is usually directed towards special programs or development, usually graduate and research programs, and may be open to both public and private institutions. The typical state university will have some 20,000 full-time students, with some considerably larger and some smaller.

The evolution of the university system varied from state to state and province to province. Some of the best universities are private and some are public. The best private universities were usually founded early, were or became well endowed with funds from private sources, and have maintained high admission and scholastic standards. Early in their histories, states established one or more state universities. The Morrill Act (sometimes called the Land Grant College Act) of 1862 provided Federal land grants to the states to establish training in agriculture and mechanics (engineering). This led to the establishment of a second state institution in many states, although some states appended the designated programs to existing universities. Following the Second World War, spurred by the large increase in the student population of the sixties, many additional state universities were founded, so that the number of state institutions now approaches one per million of population.

Admission standards to colleges and universities vary greatly. Admission is based on high-school grades and placement tests, the latter sometimes being state-sponsored college admission tests and sometimes national tests such as the SAT (Scholastic Aptitude Test). Some attention may be given to stated student goals and a desire for well-rounded students. Admission standards are high for the best institutions, both private and public, while some state colleges and universities may be required to accept all high-school graduates from the State, this being particularly true of the two-year junior colleges. Even when a state university has higher admission standards, it may be required to accept transfer students into the junior year who have received the appropriate diploma from the academic program of a junior college in the state. Admission to graduate study in a university is based on the completion of a baccalaureate degree appropriate to the graduate field of study, good grades in such a program, and a specified minimum GRE (Graduate Record Examination) score. (Professional programs such as Law, Business Administration, and Medicine may have special requirements.) Foreign students must meet these requirements with the possible exception of the GRE score and are required to have a student visa or equivalent, financial support, possibly through an award of a fellowship or assistantship, and have an acceptable TOEFL (Test of English as a Foreign Language) score*. Graduate admission requirements in Canada are somewhat different. Any student seeking admission to a particular university or college is advised to check with its Admissions Office for specific requirements.

The academic calendar for American colleges and universities is usually based on a Quarter System or a Semester System with various arrangements for a more limited summer program. The traditional academic year has been from late September to early June, divided into three quarters, September-December, January-mid-March, mid-March-June, or two semesters, September-January, February-June. There has been a recent trend to 'early' semester systems, August-December, January-May. In

* This test may be scheduled through US embassies or consulates abroad.

