Cooperation between a Statistical Bureau and an Academic Department of Statistics as a Basis for Teaching Official Statistics

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1. Introduction

The teaching of official statistics was for long deemed to be outside the scope of academic curricula and was traditionally confined to the internal training programmes of the official statistical agencies themselves and to those of international agencies. The relevance of academic training in statistics for official statisticians was questioned, for instance by Bishop (1964), who stated that “the suggestion must be avoided that it is the function of universities to turn out fully trained government statisticians”. Benjamin (1975) emphasized the need for the training of official statisticians in administrative skills, rather than in statistics and considered it important to ensure “that the statistician has administrative understanding as well as technical competence”. In recent years, however, statistical sciences have developed considerably to cover a wide range of applications, each with its own specific methodology. Thus econometrics, psychometrics, biostatistics, operations research etc., have become disciplines in their own right and recognized as closely related to classical statistical sciences. The development of a vast range of statistical techniques, developed over the past fifty years, has resulted in a high degree of specialization and this is manifested in the diversity of graduate academic programmes and curricula in statistics.

On the other hand the functions and modes of operation of governmental statistical agencies have changed considerably over the past fifty years. The developments in statistical methodology, especially in sampling techniques and analysis, have shifted the emphasis from a primarily descriptive mode, mostly concerned with the tabulation and simple description of administrative data, to very sophisticated methods of collection by sample surveys, sometimes linked to administrative data, and advanced methods of analysis, such as time series analysis and categorical data models. The increasing use of statistical models, implicitly or explicitly, both in the analysis of official data and in a wide range of supplementary operations, such as editing and imputation, matching, data dissemination, statistical disclosure control and estimation for small areas, has resulted in requirements for a far higher degree of academic sophistication in the activities of official statistical agencies.

The result of these developments has been increased cooperation between official statistical agencies and academia, in particular with departments of statistics. This has manifested itself in widespread consulting activities of academic statisticians with respect to many activities of statistical agencies, joint research activity, both in methodology and in subject-matter topics, and the enhancement of direct access of academic
researchers to micro-data collected by national statistical institutes for detailed analysis and for teaching purposes. Related to these developments, a variety of academic-based courses in official statistics and closely related topics are being provided by academic institutions and, in some cases, complete integrated study programmes in official statistics have been developed at universities.

In the following, we shall examine the conditions for successful academically based programmes and speculate that strong cooperation between academic institutions and national statistical institutes is a fundamental requirement for quality training in official statistics. We consider some models for such cooperation, based on the experience in Israel and in other countries and describe more fully the programme in official statistics at the Department of Statistics at the Hebrew University, which is based on a high degree of cooperation between the two institutions, with courses often given jointly with CBS staff. The aims, structure and specifics of the programme are discussed, as well as its achievements and failures. Finally, conclusions and recommendations for models of inter-institutional cooperation, as a basis for quality training in official statistics, are presented.

2. The Israel Central Bureau of Statistics (CBS)

The CBS was founded together with the foundation of the State of Israel as a central independent government agency, with the aims of providing the government and its agencies and the general public with the data required for policymaking, planning and research. Its functions and operations are legally determined by the Statistical Ordinance, 1972, which ensures its centralized position and independence. Thus the head of the bureau, the Government Statistician, is appointed by the Prime Minister and must “in carrying out his functions, act on the basis of scientific considerations”. A Public Council for Statistics representing State agencies, institutions of higher education and research and public bodies and independent experts, is appointed by the Prime Minister to advise him, and the Government Statistician on the Bureau’s programmes and operations. The Bureau has sole responsibility for the collection and dissemination of all national statistical data and any statistical activity of other government agencies can only be carried out after consultation with the Government Statistician. The CBS is responsible for carrying out the census of population and housing, other censuses and a variety of sample surveys and the collection of data from administrative sources.

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