

II. THE STATISTICAL SYSTEM

29. In considering the organization of a statistical system, a number of questions arise: What is the statistical system? Who is at its head? What is the legal basis of the system? Who makes sure that the head of the system does the right thing? Who pays for the operation of the system? Chapter II examines alternative institutional arrangements, but as an indication of possibilities rather than as recommendations. Clearly, institutional arrangements are divided into those that have worked well and those that have not, yet the relative importance of the factors is country-specific.

30. While appropriate organization of the national statistical service is necessary to achieve efficiency and effectiveness, other factors also contribute to its performance. Often, it is believed that problems of statistical policy can be solved by organizational rearrangements, when in reality their solution requires other means, such as capable and inspiring leadership, qualified staff, application of appropriate methods and techniques, and common sense and hard work. Consequently, reorganizational needs should be identified and satisfied but as a means to improve statistics, reorganization should not be overrated.

31. Nowhere in the world has a country vested in a single institution the responsibility to collect all the official statistics of a nation. Rather, statistical systems exist on a continuum. At one end of the continuum stand those nations in which a single institution is responsible for most of the official statistics. Examples include Australia, Canada and Mexico. However, even on this end of the continuum the collection of some official statistics is the responsibility of others. These may be agricultural, labour or environmental statistics, or statistical information based on taxes or civil registration and vital statistics. The country most representative of the other end of the continuum is probably the United States of America, which has numerous statistical agencies that are, for the most part, devoted to particular subject matters. A reference to a “centralized” or “decentralized” system generally indicates a system that is nearer one end of the continuum.

32. Section A below presents a detailed analysis of the different types of statistical systems. It is addressed primarily to those who are still working through problems of status, organization and the relationship of their agency to the rest of the Government.

A. Structure of the statistical system

1. Single institutions

33. The first version of the *Handbook of Statistical Organization*, published in 1954, describes the single institution as one type of statistical system:

“...A system of this nature is typified by the establishment of one department within the Government to organize and operate a scheme of coordinated social and economic¹¹ statistics pertaining to the whole country. This department collects, compiles and publishes statistical information ...and, in addition, collaborates with other departments of Government in the compilation of administrative and specialized statistics”.¹²

34. The advantages the 1954 *Handbook* cites for this form of organization include the following:

- Concentration of specialized and scarce manpower in one centre;
- Coordination of programmes within one office;
- Concentration of scarce equipment and know-how to operate it;
- Easy recognition of the institution in order to guarantee quality, impartiality and freedom from political interference.

35. A more general formulation of this kind of system is given in the 1980 *Handbook*:

“...A national statistical service is centralized if the management and operations of the statistical programmes are predominantly the responsibility of a single autonomous government agency, headed by the country’s chief statistician. Centralization can include outposting of staff to other departments or the delegation of certain functions to geographically separate units, which, however, remain subordinate to the central authority”.¹³

36. In addition to the advantages listed above, the 1980 *Handbook* notes that it is also convenient and efficient for users to secure statistical materials in a variety of fields from a single source, and that respondents to censuses and surveys find it convenient to deal with a single office, especially if they suspect duplication. The text indicates that a centralized organizational arrangement makes it easier to create the customized tabulations and cross-cutting arrays of data sometimes necessitated by user concerns. The text adds that protection of “incoming” confidentiality as well as “outgoing”

¹¹ Today, statisticians would add the words “and environmental” to bring this description up to date.

¹² *Handbook of Statistical Organization*, Studies in Methods Series F, No. 6 (United Nations publication, Sales No. 54.XVII.7), p. 11.

¹³ *Handbook of Statistical Organization: A Study on the Organization of National Statistical Services and Related Management Issues*, Studies in Methods Series F, No. 28 (United Nations publication, Sales No. E.79.XVII.17), pp. 14 ff.

confidentiality is easier and more credible if conducted by a single agency rather than by several. Finally the text concludes that it should be easier for such an office to maintain balance in the priorities assigned to different statistical fields, that is, to coordinate the entire service. The subsequent commentary stresses the need for an integrated system of social and economic statistics; assuming that both systems have sufficient funding and capable leadership, this is more easily achieved if the coordination problems are internal rather than external.

37. Clearly, the circumstances that exist today are not the ones that existed when the 1980 *Handbook* was developed. Some changes since then relate to the following:

- The availability of computing and printing equipment at relatively low cost and the wide diffusion of the necessary know-how to operate it;
- Easier access to mathematical/statistical techniques and their availability in pre-packaged computer programs for easier application to problems of estimation and formal data analysis;
- The introduction of advanced quantitative methods in the teaching of the social sciences;
- The globalization of curricula;
- The advent of universal telecommunications, including worldwide access to and use of the Internet;
- The sophistication of use and of users has increased noticeably, implying that their demand for integrated statistics has also increased;
- Increased pressure on public sector resources, despite the progressive relative cheapening of computing and data storage facilities;
- Increasingly, a shift of responsibility for some functions¹⁴ once associated exclusively with statistical agencies, centralized or otherwise, to private sector enterprises;
- Greater pressure to produce internationally comparable data, not only within new inter-country arrangements such as the European Union but also because of the greater number of free trade and customs union entities.

38. Despite these changes in the environment, most of the advantages of centralization outlined in the 1980 *Handbook* are still valid.

39. Whether or not these changes, taken together in a national context, suggest the need for a radical change in the institutional arrangements prevalent to date is a question

¹⁴ Examples that have come to light include printing and disseminating; document storage and retrieval; data entry; systems analysis; and collecting consumer prices.

for each government to answer, taking fully into account its own circumstances. However, today's state of affairs seems to bear out the following note of caution sounded in the 1980 *Handbook*:

“...Amendments in the scope and range of activities within a national statistical service require a specific high-level policy decision by the central Government and may even involve special legislation. Such a decision is not likely to be influenced entirely by the results of an objective analysis of the alternatives. Inevitably, past practices, interdepartmental rivalries, the structure and size of Government, the impact of tradition and personalities, and so on come into play. Moreover, when possible changes in the organization of a national statistical service are considered, short-run disruptions in service that may be induced by the change must be weighed against the long-run gains”.

2. More than one institution

40. Two advantages are usually mentioned in relation to decentralized systems. The first is that the statistical agency is close, both physically and intellectually, to the subject-matter policy office. In this case it may be more likely that the statistical agency will be responsive to policy needs and be aware of impending requirements. The second concerns the chief statistician. As the present *Handbook* points out, the chief statistician is enormously important in defining the culture of the institution, and in providing intellectual and ethical leadership. In a decentralized system a poor choice for the head of one agency or institution will not directly affect the culture in the other agencies.

41. The first edition of the *Handbook*¹⁵ distinguished three types of decentralized systems:

- A statistical system decentralized by subject with a coordinating authority;
- Statistical systems decentralized by subject with no central control or coordination;
- Statistical systems decentralized by subject with a minimum of control or coordination.

42. The first of these is to be avoided if at all possible. It is usually the product of historical accident and a rapid, disorderly rise in demand for quantitative information by a handful of ministries and other government agencies.

43. Although the second type of system is not mandated by law, it is entirely possible that it will be able to provide effective coordination in a decentralized system. In contrast, the third system, while operating within an established legal framework, may be ineffectual if de facto coordination is absent owing to indifferent leadership or inter-institutional jealousies and rivalries.

¹⁵ 1954 *Handbook*, pp. 10 ff.

44. The preceding remarks on decentralization relate to institutions outside the central statistical agency that deal with certain subject matter areas. Entirely different is regional decentralization, which may take various forms. This form of decentralization may also imply certain coordination problems. Whether such decentralization is, on balance, efficient and effective depends very much on national circumstances. Often it is a function of either the size of the country or of the government structure, as for example in federal systems.

45. Such decentralization has two basic forms but many national situations are a mix of the two. The first form is comprised of regional statistical offices, sometimes in two hierarchical layers (e.g., regions and districts), but totally controlled by the central statistical office. Such systems are sometimes called “vertical”. In this form, the role of the regional offices is usually exclusively data collection as prescribed by the central office. Often, a factor in the creation of such a system is the size of the country, in combination with developing communication systems. Coordination in such systems should proceed smoothly provided the central office has sufficient resources for training regional staff.

46. In some cases, in addition to being responsible for data collection, the regional offices have an important role to play as dissemination centres, as in Canada and France. In the case of Australia, the regional offices act as *national* centres for certain areas of statistics. Thus, the office in Victoria (Melbourne) is responsible for the compilation and dissemination of statistics about the services sector of the entire country.

47. In the other form of regional decentralization, the regional offices are *not* directly or not exclusively controlled by the central office, but are part of the regional administration of the country. Often, this occurs in federal systems of Government. A well-known example is Germany, where cooperation between the Federal Statistical Office and the statistical offices of the state Governments is based largely on a complex system of agreements about data collection, statistical standards and other issues. Switzerland is another example. Coordination in such systems need not be a major problem, but may be rather more difficult to achieve and require more effort than in vertical systems. For example, in Spain each autonomous region has its own statistical office that is maintained by the regional administration. However, the autonomous regions are subdivided into provinces, and the statistical offices at the provincial level are operated by the central system.¹⁶

¹⁶ In another scenario, the central bank coordinates economic statistics because it compiles the national accounts and provides the means for most innovative statistical activities. However, since the central bank does not have the legitimacy of a central statistical agency when it comes to defining statistical standards, adopting questionnaires and nomenclatures, and conferring internationally with statistical counterparts, its capacity to coordinate is limited. This will be considered further in chap. II, section B.7.

3. Importance of brand-name recognition

“...A distinction must be made between legal status and status in the sense of an agency’s professional and administrative standing in the eyes of other government bodies and the public. It is in fact status in the latter sense that matters most for the external capability of a statistical agency or service”.¹⁷

48. Usually a stand-alone statistical agency is recognized as an identifiable agency within the central Government and its director reports to a minister or the equivalent. Generally the agency occupies its own building, and in the eyes of the public its activities are attributed to the agency itself, rather than associated with the governing ministry or an equivalent governing body. Thus in countries where an institute of statistics compiles the consumer price index (CPI), the public would recognize that the index is compiled by that entity and not, for example, by the ministry of economic affairs.

49. Existing as a recognizable agency within the Government implies budgetary recognition.¹⁸ This means that in the government accounts there will be one line mentioning the institute and its corresponding appropriation. In virtually all countries where the statistical system is of some size and there is a dominant agency, that agency stands alone whether or not it is called an “institute”. In smaller countries, however (and in general during the period preceding the Second World War), the examples of directorates or directorates general nested in a ministry are numerous.

Box 1. Brand and no-brand statistics

Recognizing quality in statistics and using them with trust are closely associated with the recognition of the agency that has compiled them. The wider the agency’s recognition, the greater the acceptance of the information because of the element of trust. However, to gain the widest possible recognition, the statistical agency must be visible, and its visibility increases if it stands on its own as part of the central Government.

B. Coordination tools

50. Regardless of the location on the continuum of the particular structure of a nation’s statistical system, some coordination will be necessary. Coordination is desirable for a variety of reasons, including the following:

- To create a national statistical system in which the outcomes of various data collections are comparable or can at least meaningfully be related to each

¹⁷ 1980 *Handbook*, p. 21.

¹⁸ Some have argued that budgetary recognition is a mixed blessing. At times it protects the statistical system from arbitrary reductions imposed by ministers who may have different ideas about national priorities. However, as a simple directorate, unmentioned in the public accounts, a system may escape excessive reductions at times of major budget cuts.

other, harmonization of concepts, definitions, classifications and sampling frames is necessary;

- To avoid duplication of effort, as well as undue burdening of respondents, agreements about efficient and effective data collection are required, including the use of non-statistical government data files;
- To strengthen the position of and enhance the image of official statistics, coordination of dissemination methods and pricing is very useful;
- To represent a country's interests internationally, coordination of international policies is needed.

51. This section addresses effective coordination tools in both centralized and decentralized systems. These include incentives and deterrents for effective coordination; issues on which coordination is required; and tools that make coordination possible. The information on mechanisms that ensure the spread of information and monitor compliance is applicable more or less to both systems. Some tools specific to decentralized systems are identified, and finally there is an overview of the role of the central bank.

1. Incentives

52. If the various agencies in the system have the distinct view that they are better off by not being part of a coordinated system, it is unlikely that that coordination will succeed no matter how well legislated. Governments are wary of enforcing coordination with severe sanctions, and without these, only incentives are likely to work. With respect to data collection activities, there are in fact objective reasons why a ministry may decide to continue operating its own statistical cell rather than assign the work that it has carried out in the past to the central statistical agency. Those reasons include:

- The view that users' demands can be met accurately and on time only if the work is handled within the ministry;
- The impression that the central statistical agency does not possess the skills and knowledge required, largely because the ministry is in charge of a very specialized area or because its infrastructure is better suited for the particular statistical activity;¹⁹
- The view that the statistical work of the ministry is an offshoot of its administrative procedures and is therefore handled more efficiently than if taken over by third parties;
- The acknowledgement by the ministry that in any case its legislation prevents the sharing of information with other statistical agencies and that the effort required

¹⁹ This happens very frequently with ministries of agriculture: their concerns are specialized, and they may employ a network of extension agents who have the right training to undertake statistical fieldwork.

to change the law would exceed the benefits derived from transferring or sharing the responsibility.

53. Incentives to encourage agencies to take part in a well-coordinated system could include any of the following:

- Sharing information that would improve the ministry's capacity for statistical response, assuming it has the same attributes (classification, standards, coverage, etc.) as the statistics produced centrally;
- Providing access to statistical expertise that complements the expertise available in the statistical cell in the ministry;
- Providing input in determining priorities in all-purpose statistical initiatives such as the census of population or in relevant classification systems;
- Engaging in joint statistical activities so as to provide leverage for its own budget.

54. Of course, the relative weight of any of these elements will vary over time and according to the individual agency's stance on whether or not the prospects of coordination might be beneficial, given its programme, users and budget. Chances are, it will not be moved by such abstractions as the benefit of an integrated system of social and economic statistics. It may not even be moved by the argument that its credibility with users will rise, as will the receptivity of respondents, once they are aware of the efforts made to avoid duplication and simplify requests. In the majority of situations, such gains will not be immediately evident. However, a clear demonstration by the users of ministry statistics that they feel better off if they are provided with a broader range of data could be the decisive factor.

55. Invariably, coordination results in the loss - real and perceived - of independence by those coordinated. For example, the avoidance of duplication could mean that a particular statistical cell has to rely on the statistical or administrative work of others to find its information. It may find that it is no longer free to adapt standards and nomenclatures to its convenience but has to settle for those adopted by the majority or imposed by the coordinating agency. Nevertheless, sooner or later, the proximity of the cell's practices and results to those of other statistical agencies will lead users to question their consistency, and eventually coordinated answers will be called for.

2. Some useful mechanisms

56. The most frequently seen coordination tools are nomenclatures and some combination of questionnaire and budgetary control. The application of these controls can be formal or informal, depending on tradition and an assessment of the most efficient way to ensure compliance. There may even be a law concerning the details of coordination. Matters are helped if there is a political decision or at least a decision made at the highest level of the civil service that the only legitimate standards of classification are those promulgated by the central statistical agency. In many countries, the statistical

agency will act as a mediator between international organizations and domestic statistical agencies. The international organizations are perceived to have the legitimacy and knowledge required to determine standard classifications.

57. In the case of questionnaires, and even administrative forms that request information to be used for statistical purposes, one way to ensure coordination is to create a logo indicating that the form has been inspected and approved by the relevant central body. It is important that in exercising control, the central statistical agency is seen as a facilitator, not as an impediment to initiatives. This is not easy. An inter-agency commission that approves data collection instruments controls respondents' burden and is not associated with any particular agency but is provided by the central statistical agency and might allow for the perception of the central statistical agency as a coordinating friend rather than as a controlling enemy.

58. In general, coordinating mechanisms tend to be in the form of committees, formal or informal, but in any case sufficiently manageable to meet regularly and reach decisions that the represented parties can put into practice.

59. For the work of these committees to be fruitful, they must have the power to approve forms certifying the use of certain nomenclatures used for statistical purposes; they require support from higher levels in the political hierarchy; and officials in each ministry or agency with a stake in the statistical system must demonstrate that they regard taking part in collective initiatives as a necessary duty.

60. The central statistical agency should remember that its concerns would seldom be the highest priorities for other departments and agencies. Accordingly, it should shoulder the burden of maintaining coordination. So long as it perseveres and takes its responsibilities as coordinator of the system seriously, thoughtfully and in a spirit of cooperation, the central statistical agency can provide cohesion for the system. However, the statistical agency shows either the least bit of impatience or a lack of interest, the other participants may take it as a signal that the coordination effort should be of little consequence to them.

3. National statistical council

61. Coordination may be considerably helped where there is a national statistical council. Countries with no previous experience with such councils but convinced that their existence may be of help should take advantage of any relevant opportunity that offers itself. For example, having a nationally visible, prestigious figure serve as chair on a sustained basis provides an opportunity to launch the council and give it substantive powers. The central statistical agency or the chief statistician should find an *ex-officio* role in the council, thereby strengthening the office's influence in discussions about coordination. The role of the national statistical council will be discussed in detail in chapter II, section D.

4. Coordinating budgets and standards

62. A powerful budgetary tool to ensure coordination is to estimate a budget for total statistical activities and to give the coordinators the power to allocate it, with fairness regarding quality and response burden in mind. A coordinating agency armed with the power to make budgetary allocations will find it a good deal easier to impose standards, although it is clearly in the best interests of users and of the statistical system to integrate, rather than to maintain sets of non-comparable statistics.

63. At any time, a legislator might ask the question, “How much does it cost to produce official statistics in my country”? This can be an ominous question for statisticians. If the answer is not readily available, a Government in the process of making serious cutbacks may choose to allocate a disproportionate share to the central statistical agency, oblivious to the fact that it may carry only a small portion of total statistical activity.

64. In certain countries, the answer is relatively straightforward. The cost for a few specialized activities must be added to the initial budget of the central statistical agency, and the result is the total amount committed to statistics. However, in many other countries the answer is difficult to provide with any degree of certainty. The majority of statistical activities are conducted in other ministries and agencies, and in those cases where they are not explicitly noted in their department’s financial statement, there is no reliable way of estimating their expenditures. Often a literal “guess” is required, particularly in cases where statistics are a by-product rather than the focus of a department’s work. Since staff members, and particularly professional staff, will be engaged in a variety of overlapping activities, they certainly will not be able to gauge accurately the resources invested in statistics per se. While estimating expenditures gives a rough idea of the relative amount committed to statistics, it is unreliable in discerning year-to-year changes.

5. Placement of staff

65. The tools of coordination mentioned so far exclude coordination through the placement and intermingling of staff. Managing government statisticians is an issue that is relevant in only a few countries. Essentially it entails placing in the hands of a capable authority, the chief statistician being the obvious choice, the power to certify that one is allowed to work in the public sector as a statistician. The system can have additional attributes. For example, the school or institute that trains statisticians may be attached to the statistical agency. If it is highly respected, it may find itself catering to private as well as to public sector needs. In those circumstances, the chief statistician becomes not only the effective head of public sector units conducting statistical work, but head of the statistical profession irrespective of where its members exercise their skills.

66. Where coordination is achieved through staff members that share the same training and professional leadership, many of the coordination tools mentioned above may not be required. If the need for such devices does arise, they are likely to be created more or less spontaneously, without the need for any great formality.

67. A number of agencies have implemented regular exchanges of staff as a means to expose staff members to a broader range of ideas and practices. If the central agency is the interlocutor with other countries' agencies, such exchanges will enhance its prestige and status and serve to foster the ability to coordinate. Even though this is practiced on a small scale, and involves relatively few countries, the idea is praiseworthy, as it strengthens the sense of international community. It can also be used as an incentive by a central statistical agency, particularly in the case of developing countries, if the exchange takes place between the agency and its peers abroad.

6. Coordination tools for a decentralized organization

68. The preceding section presented different types of coordination tools that should be considered when the statistical system is a more centralized one. Clearly, the more decentralized a system the more important coordination becomes. Many of the tools introduced above are also applicable to a decentralized system. However, experience has shown that the most important tools that should be considered are the following:

- The ability to control or at least to significantly influence the budgets of the statistical agencies;
- The ability to control whether or not an agency is allowed to carry out a data collection activity;
- The ability to decide on nomenclatures for the statistical system.

69. These coordinating functions may be executed by a separate body or by one of the several statistical agencies. Even if the above three tools are employed, there is one other important consideration. This has to do with the manner of the application of the tools. More specifically, the application can be done in an informal manner or there may be a formal process. In the first instance, there may be an informal agreement between the statistical agencies and the agency that is doing the coordinating (or a separate coordinating body) to the effect that the coordinating agency will have the authority to apply the above tools. In well-established statistical systems, this informal application can be very powerful indeed. If there is a lengthy tradition behind the agreement, the pressure to continue their use will be very powerful. In new or reasonably new systems, however, this may not be the case, and a more powerful application mechanism may be needed. This is the formal process. A weaker form of the formal approach is for the prime minister or president to issue an order; a stronger approach is through legislative action. While it may be difficult to influence either of these formal mechanisms, once they are in place the responsibilities of the members of the statistical system will be clear. The coordinating agency will also be in a much stronger position to apply these tools.

Box 2. Centralization versus decentralization

Centralization and decentralization are the subject of intensive discussion in the statistical community. Some of the most important issues related to this subject are summarized below:

- The stronger the powers of coordination at the centre of the system, the greater the chance of integrating statistics effectively;
- Integrated statistics (definitionally, conceptually, through the use of harmonized nomenclatures and classification devices) are immensely more powerful than statistics collected without harmonization;
- If the office in charge of coordination is backed by numbers, the legal power to apply the tools of coordination and a healthy budget, its capacity to coordinate is correspondingly greater than that of an office lacking these assets. See chapter II, section B.6 above;
- In a system where the tools discussed in chapter II, section B are lacking, it is vital for the chief coordinator to have the status, access and capacity to offer career opportunities to intelligent, competent and motivated staff;
- Physical proximity to policy analysts in decentralized systems can be important to statisticians in determining policy needs. However, examples exist of centralized systems that have found ways to be responsive to the requirements of policy officials;
- The ability of centralized systems to create convincing career opportunities tends to increase with size. Small statistical institutes with a limited number of professional posts give the impression of limiting career prospects;
- Economies of scale give the chief statistician more flexibility in efficient management of his/her budget;
- Whatever the institutional arrangements, policy analysts and decision makers, particularly in the more specialized activities, must feel they can involve statisticians directly in their quest for more relevant and reliable quantitative information.

Notwithstanding these arguments, the 1980 *Handbook* recognized that the practical issue to address is that of “degree of centralization”, about which it says:

There seems to be a consensus that one of the statistical institutes among the several responsible for the collection and dissemination of statistics, should “...be responsible for population censuses, household surveys, demographic statistics and a wide range of economic statistics involving establishment and enterprise censuses and surveys, as well as prices, international trade, the national accounts and other across-the-board activities. There seems to be less of a consensus in regard to ... the social sphere - education, health, crime etc. - where statistics are based to a substantial degree on administrative records collected by other government departments...”^a

^a *Handbook of Statistical Organization: A Study on the Organization of National Statistical Services and Related Management Issues*, Studies in Methods Series F, No. 29 (United Nations publication, Sales No. E.79.XVII.7).

7. The role of the central bank

70. The Statistical Commission noted at its nineteenth session in 1976:

“...many developing countries have experienced severe losses of professional staff in their central statistical organizations, thus reducing their contributions to planning and policy formulation processes. Those losses and the generally severe shortages of trained statistical personnel in those countries reflected in large part the disadvantaged position of the statistical services with respect to pay scales and related working conditions”.²⁰

71. This situation has not changed. In fact the disparity in working conditions between statistical agencies and central banks, for example, may be increasing. The present *Handbook* is not the place to lobby for an improvement in working conditions for the staff of statistical agencies. However, many of the remarks about organization included in this book may seem superfluous so long as such serious imbalances persist.

72. Central banks have taken over a number of key statistical activities in countries where, in spite of a long-standing tradition of statistical production, the budget of the central Government is no longer thought sufficient to support it.

73. When the central bank is responsible for macroeconomic statistics and key economic indicators, the bank commissions basic statistics from the statistical agency. In addition, a number of the ministries have their own statistical budgets and use them to compile special performance statistics.

74. Often there is no coordinating mechanism in this type of system; only the standards required by the system of national accounts and by the needs of the economic policy makers. While this situation may not be ideal with respect to the long-term development of the statistical system, it is nonetheless a workable model.

75. Existing imbalances in salary and working conditions between the central bank and the statistical agency may significantly limit the agency's capacity. In the light of such difficulties, it is prudent to recognize the reality of the situation. Even if there are no legal provisions on which to base coordination, the statistical agency should work out a de facto arrangement with the head of the central bank's research department.

C. The chief statistician

“...The external capability [of a statistical agency] is also much influenced by the status of the head of the statistical service in relation to colleagues in the government hierarchy. There can be no doubt that the building of a robust statistical service is contingent on assigning top people to it. In view of the great national importance of many decisions which may be affected by statistics, it would appear to be in the national interest for the statistical service to have an equal opportunity to compete with other government departments for an outstanding individual of proven capability to be its leader and manager...He or she should be in a position to develop rapport with policy advisers of other government departments and to negotiate various proposals

²⁰ *Official records of the Economic and Social Council, 1976, Supplement No. 2 (E/5910), para. 138.*

on statistics with authority and insight...He should have the same status as the top civil servant of a ministry.”²¹

76. If there is an agency that can be called the central statistical agency, it is the head of that agency that is referred to here as the chief statistician. The chief statistician should be the highest authority in the government statistical system with respect to substantive statistical matters.

77. Not all national statistical systems have an obvious chief statistician.²² This section considers the matter of status; the practices governing appointment and resignation; matters of authority and competence; and the underlying issue of qualifications.

1. The chief statistician's superiors

78. The terms of reporting vary a great deal. By and large, in situations where the statistical agency is an independent agency, the head reports to a minister. However, the terms of reporting vary considerably between countries. In some cases, the minister is responsible for the appointment and dismissal of or for requesting the resignation of the chief statistician. In other cases, the chief statistician is appointed by the parliament and it is the parliament that delegates its supervisory functions to one of its members, normally the minister to whom the responsibility for the central statistical agency is assigned.²³

79. More crucial than the chief statistician's formal superior is the official with whom the chief statistician interacts on a day-to-day basis or on key occasions. For example, some statistical agencies are located in the prime minister's office, but it does not follow that the chief statistician interacts regularly with the prime minister. In fact, owing to the prime minister's other concerns, the chief statistician may find that his/her regular liaison is of much lower rank than if the statistical agency were placed under the supervision of another minister.

80. A question arises relating to the selection of the minister to be placed in charge of the statistical agency (and with what power). The trade-off is easy enough to understand. The more powerful the cabinet position of the minister in charge, the more the status of that position reflects in principle on the chief statistician. Other things being equal, more status accrues to the chief statistician if he reports directly to the minister of finance than, for example, to the minister of communications.

81. The matter of reporting to a minister and the coherence between the minister's portfolio and the service provided by the statistical agency have to be viewed from the proper perspective. A relationship between chief statistician and an elected politician is required because the former must be accountable and take political guidance. Neither of

²¹ 1980 *Handbook*, p. 21.

²² In fact, even when the system is centralized, it may be difficult to ascertain who the chief statistician is because of the existence of coordinating boards.

²³ The designation “minister” is shorthand for a variety of cabinet officers. In certain cases it is the head of Government who retains responsibility for the statistical agency. In some countries of Latin America, it is the vice-president.

these constraints implies a loss of independence in the sense that in the end, it is the chief statistician who decides on the methods, the results and their presentation.

82. Different benefits and drawbacks arise from the relationship between the chief statistician and his/her superior, depending on the amount of influence (not personal, but rather formal) the minister possesses. A highly influential minister would have more of a hand in determining budgetary allocations. However, it is possible to imagine a situation in which public credibility might be challenged (how would an important minister such as the minister of economic affairs resist the temptation of putting pressure on the chief statistician to get more acceptable results for the Government or a political party), and the many claims on the minister's time could heavily affect his/her sense of priorities so that his/her interest in the statistical budget might be minimal. Conversely, a less influential minister in charge of a more neutral and less demanding portfolio, or even a cabinet member without portfolio might preserve credibility and prove to have more time and interest, but have less influence on the outcome of budgetary allocations.

83. In many developing countries, a longstanding relationship had existed between the planning body and the statistical agency. The planning body by its nature had extended its interest to virtually the entire output of the statistical agency and therefore was in a position to articulate its priorities in a balanced way. As ministries of planning have changed functions, been retired, or simply renamed, the links forged have tended to be transferred to the economic portfolios that took over from the planning body.

2. The chief statistician's colleagues

84. Perhaps the most important advantage of high status is that it affords the chief statistician greater access to key people in Government as well as to others who influence public opinion and the economy. The critical definition is that of "user", which extends all the way from the senior official who proposes quantitative criteria for an assessment of the performance of the country's health system to the junior professional who writes a paragraph on what the latest indicator of industrial production appears to suggest. In the structure of the statistical system, access to the latter may be useful, but access to the former is essential for the preservation of the agency's claim to relevance.

85. Accordingly, the chief statistician must have easy access to the highest official (the minister or, in many instances, someone just below the minister) in each of the major user departments. Such access, provided it is frequent and sustained, allows a chief statistician to make informed decisions about priorities and internal allocations of resources. Without it, the valuable insights required for successful decision-making may be absent, particularly during times of shifting priorities.

86. The chief statistician must preserve a delicate relationship, not only with potential users, but also with the suppliers of information contained in administrative records, for their degree of responsiveness has substantial effects on the success of a statistical program. Interaction with senior officials responsible for such activities as taxation, customs administration and social security is fundamentally different from interaction with potential users. With users, the chief statistician inquires into concerns, priorities

and trends, with the specific objective of providing a service. With suppliers of information, the chief statistician is vitally dependent on the goodwill of his/her counterparts, but can give little in return; hence the importance of high status with strong political support.

87. If the chief statistician is also the chief coordinator of the statistical system, his/her status must give him/her access to the principals of departments containing statistical cells, and his work must include regular meetings with the managers of those cells.

88. In the case of federations, if the statistical system is to have a truly national character the chief statistician must have frequent, unfettered access to the relevant authorities in the federated entities and be recognized as the chief statistician or at least the *primus inter pares* by his/her regional peers.

89. Finally the chief statistician must also maintain a rapport with peers abroad. Heads of statistical agencies, particularly the smaller ones, who cannot maintain a body of expert economists, sociologists and demographers should consult their peers frequently and informally about problems they share, and judge whether tested solutions abroad could be implemented at home. Once a fraternal atmosphere is created and maintained, these judgements can be made more easily. Maintaining these relationships has become incomparably easier with the relative reduction in telecommunication costs and, above all, with the advent of the Internet. If new chief statisticians do not inherit this invaluable resource from their predecessors, it should be acquired immediately and fostered.

3. Qualifications of the chief statistician

90. In order to select the best qualified individual for this position three issues must be addressed: Who should the chief statistician be? Who should make the appointment? How should the appointment process be conducted?

91. There are several attributes a chief statistician should possess. First, he/she should be a statistician - someone proficient in statistics, or someone with a profound understanding of statistics. Second, the chief statistician should be capable of running a large professional organization; and third, this person should understand and be sensitive to the wishes of users whose needs are likely to have a profound influence on the activities of the agency.

92. These attributes are seldom found with equal weight in one single person. Some chief statisticians are distinguished professionals (statisticians, quantitative economists, demographers, etc.) who bring to their post the knowledge, prestige and wisdom they have acquired in the course of their careers. Others, preferably with a strong professional bent, have demonstrated excellent managerial instincts by successfully directing public programmes, agencies or private institutions. Still others bring the experience and the contacts that only long years in government can produce.

93. Obviously, the nominating authority will seek to maximize all three attributes, but it may have to make a choice at a very early stage. It may decide to select a chief statistician from within the statistical agency or may prefer to scout the outside world - it may seek the most suitable candidate in academic or research organizations in an attempt to emphasize the professional component of the ideal string of attributes; or it may consider successful programme managers with the right disposition and academic background to assume leadership of a statistical agency.

Box 3. Needed attributes change over time

As the needs of the statistical agency evolve, the weights of the various attributes desired in a chief statistician will vary. Clearly an agency that has run into trouble over personality conflicts or budgetary difficulties, appears to be chronically late with its output, or has an amorphous programme of future activities requires a leader with high-level managerial capacity. An agency that has allowed itself to be placed at the margin of Government concerns or appears to be insensitive to the immediate needs of decision makers might require a leader who knows the ins and outs of Government. However, once the perceived crisis has subsided, the requirements may change again.

94. A wise nominating authority demands a chief statistician who is highly independent. If it appears that the chief statistician is overly influenced by an interested party in Government, the credibility of key economic indicators, and eventually of the entire statistical programme, is jeopardized.

95. The perception of personal and institutional independence is so important that the process of selection and appointment is given special attention, at least in some countries. For example, in countries that have a thriving professional statistical society, the Government often seeks its advice before making the final choice.

4. Term of office of the chief statistician

96. The term of office of the chief statistician is just as crucial as that of nomination. Three standard situations can be identified:

- The chief statistician's term of office is the same as the executive's (this is the case with the chief statisticians in a number of countries in Latin America);
- The chief statistician is appointed for a term of office that can be renewed²⁴ (this is the case with the Government Statistician of New Zealand; the Commissioner of the Bureau of Labor Statistics of the United States; and the Director of the Office for National Statistics in the United Kingdom of Great Britain and Northern Ireland. It appears to be an emerging trend;

²⁴ There are many variations on this practice. Some appointments are limited to one term, with no chance for renewal; in other cases, there may be only one renewal; or there may be as many renewals as the nominating authority sees fit.

- The chief statistician serves an unlimited term, which ends either with his/her resignation or removal from office (this is the case with the Chief Statistician of Canada).

97. The considerations at play are fairly obvious. Short terms of office interfere with continuity; statistical programmes tend to extend over significant periods of time. A series of chief statisticians would not share a common vision and programme commitment, and would therefore be unlikely to produce a consistent approach to statistical policy or predictably adapt to new circumstances. On the other hand, excessively long stays in office may produce stagnant programmes, lacking energy and innovation. While such a situation may keep the statistical agency out of potential conflicts, it may also marginalize the agency and constrain its staff, eventually leading to reduced budgetary support.

98. The above situations represent two extremes. In designing laws or regulations and establishing standard practices, one must guard against the greater of the two evils. One would expect to find in all, or at least in the majority of cases, a provision that authorizes the political official responsible for the statistical agency²⁵ to request the chief statistician's resignation.

99. Requesting a resignation is less likely to be necessary if the chief statistician serves a limited, rather than an open-ended, term.

100. The existence of an effective national statistics council is helpful particularly in preventing arbitrary appointments and dismissals.

5. Demanding resignation and threatening resignation

101. Responsible ministers will be very reluctant to demand the resignations of chief statisticians for reasons other than clear incompetence. Refusal to disclose confidential information or to obscure or delay the presentation of a key result should never be a reason for such action. Most Governments will understand that credibility is an essential element of a functioning system of official statistics. If, for example, a Government is elected on the basis of its commitment to full employment, and in fact the statistics show strongly decreasing unemployment numbers during its term, these statistics will only be important if there is no doubt about the trustworthiness of the statistical system or its chief statistician. Moreover, the prospect that a chief statistician will publicly resign rather than compromise his/her integrity is a strong deterrent against such a request. Identifying confidential data and modifying data or its presentation are, as mentioned before, examples of such breaches of integrity.

102. Conversely, a chief statistician should not use his letter of resignation as a bargaining tool, except when the integrity of the office is threatened.

²⁵ In certain countries this could be parliament. In others, it could be the prime minister, the minister responsible, or even the top civil servant acting with the delegated authority of a higher-level official.

6. The authority of the chief statistician

103. So far the present chapter has examined the chief statistician's surroundings – who is responsible for the appointment, from who he/she takes orders and those with whom he/she associates. The next issue of concern is the authority of the chief statistician.

104. There are operative failures that the user community should not accept from any chief statistician. For example, it would be unacceptable to publish the CPI two months after the period of reference or make prescriptive comments about the adequacy of a particular government policy. Nevertheless, it is acceptable for the chief statistician to advise that the extent of revision of quarterly or annual GDP cannot be cut down substantially within current budget constraints. Likewise, the chief statistician can claim that if questions relating to ethnicity must be the object of a dedicated survey, the budget must be increased. If the Government lacks confidence in the chief statistician's professional assessment, it should request a resignation.

105. Assuming that the chief statistician's overall performance is acceptable, the Government should not become overly involved in the internal affairs of the statistical office. For example, it is unacceptable for the Government to suggest to the chief statistician that in presenting quarterly GDP only seasonally adjusted numbers should be shown, or that the measure of inflation should exclude food (this is quite different from asking for a CPI sub-aggregate that excludes food; the former suppresses information, whereas the latter is a modification of a standard presentation for the convenience of the analyst).

106. It follows that the chief statistician must have the legal basis for, and would be expected to put forward authoritatively the following: his/her best interpretation of users' combined wishes; the manner (frequency, accuracy, timeliness, detail) in which those wishes can be met; the methods used to estimate; the burden imposed on the community; and the overall cost involved. The chief statistician should not be second-guessed or hindered unless it is to show that the Government has lost confidence. It is also understood that when the chief statistician announces his/her programme, all available stakeholders will have been consulted.

107. In situations where, in addition to being the head of the official statistical agency, the chief statistician is also the chief coordinator of the statistical system, he/she should be in a position to speak as a coordinator (as *primus inter pares*). In this capacity the chief statistician should have the authority to commit the system to certain standards and quality characteristics, as well as to address the social burden on behalf of all members of the system.

108. Finally, the chief statistician should be the spokesperson for his/her country in matters involving international coordination and exchanges;²⁶ its representative in international meetings; and the person who determines standards when they require revision or updating.

7. The competence of the chief statistician

109. The detailed knowledge required to choose among different systems options for a census of population or for a survey of large and complex enterprises is what one might commonly associate with a specialist, not with a senior executive officer. Nevertheless, such knowledge is expected from the head of a statistical agency. In addition, the chief statistician will be confronted with matters dealing with such issues as health, education, ethnicity, aggregation bias, treatment of outliers, leads and lags in the foreign exchange market, and assets held by private non-banking residents. On each of these subjects he/she will be expected to provide an authoritative opinion. Gaps in the chief statistician's expertise will diminish the professionalism that is one of his/her claims to independence.

110. For these reasons, the chief statistician requires above all the prudence to surround himself/herself with specialists who can propose comprehensible options and recommend those believed to be in line with the overall framework for which the chief statistician is responsible. In his/her debriefing on various options, the chief statistician must respond quickly at times and patiently at others, and must always demonstrate an enormous capacity to listen.

111. In the last few years, considerable attention has been devoted to increasing the capabilities of chief statisticians through various forms of international cooperation. Without creating very intensive cooperative arrangements such as those that exist in the framework of the European Union, regional conferences organized by the United Nations appear to be growing in stature, and a considerable investment has been made in informal meetings on specialized subjects, albeit at levels lower than that of chief statistician. The primary impetus for these conferences is to facilitate access and promote the exchange of opinions on potential solutions to common problems.

D. The national statistical council

1. Oversight or advice

“...Irrespective of the degree of centralization of the national statistical service, a national statistical council or commission, composed of representatives of the private sector, the universities and Government, may be established either at the top of the external committee

²⁶ Admittedly there may be a problem in situations where the head of the research department of the central bank is the country's chief economic accountant, responsible for its national and government accounts, its balance of payments and the measure of the country's international investment position. In this case, international cooperation with other chief national accountants may be conducted via the International Monetary Fund and involve a different cast of characters. The position of the chief statistician on these matters will have to be clarified in a manner consonant with the importance and the dignity of the post. An unacceptable alternative would be to deal with two discrete entities.

structure or independently of it... A top-level co-ordinating council may serve as a guiding and protective device - but mainly as regards the solution of problems of a general nature. Whether the benefits derived justify the cost is likely to depend, to a large degree, on national circumstances, including the political situation”²⁷

112. In the 1980 *Handbook*, this passage constitutes the only reference to councils as advisory or governing institutions. Since these words were written, the importance of such bodies has grown, and their introduction in areas where they did not already exist has become a visible trend. Their roles vary,²⁸ but it is possible to state the following, taking into consideration their formal mission and the responsibilities they have assumed as their relationship with the statistical agency and its senior officers has flourished:

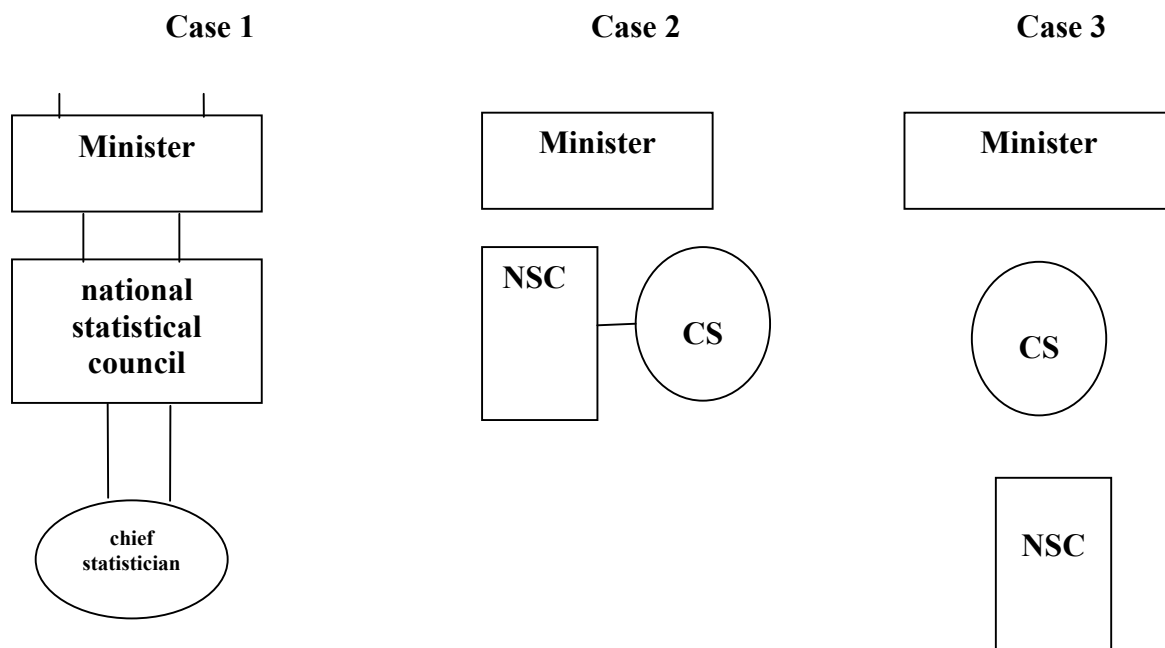
- A national statistical council can be used for the defence of the statistical agency. It exists to protect the statistical agency from attacks to which it cannot properly reply owing to restraints on public servants;
- The council can assume the role of guardian of fundamental values such as the protection of privacy;
- The council is the ultimate guarantor that, within existing resources, the statistical programme as defined by the chief statistician and instituted by his/her agency preserves the best possible balance among contending claimants for statistical attention, including economic, environmental and social statistics; national and regional details; and reliability and timeliness;
- The council is the interlocutor a minister might choose if he/she wishes to have the professional opinion of the chief statistician validated by a group of impartial experts;
- The council is the body a minister could turn to for advice and succession management in the case of a disagreement with the chief statistician;
- The council's proceedings would constitute a venue for registering opinions about the output of the statistical agency.

113. Since the various roles above imply different relationships - to the chief statistician, to the minister and to the public - it is also necessary to examine how the council may or should be inserted at the highest level of communications. The schematic presentation in figure 1 summarizes a few of the possible basic relationships between a statistical agency and what is referred to in the 1980 *Handbook* in a generic way as a “national statistical council”.

²⁷ 1980 *Handbook*, pp. 12-13.

²⁸ An example of a fairly typical advisory structure can be found in *Framework Document: Office for National Statistics* (London, 1996), para. 1.5, which states: “An Advisory Committee will advise the Director on the statistical work of the Office, on annual corporate targets and on his responsibilities as Head of the Government Statistical Service”.

Figure 1. Illustration of three different sets of relationships between the minister, the national statistical council and the chief statistician ^a



Legend

NSC	national statistical council
CS	chief statistician
Minister	elected officer (generally a cabinet officer) responsible for statistical agency

^a Even though the presiding body is indicated as national statistical council in all three cases, in fact its role ranges all the way from that of a board of directors to that of an advisory board.

Case 1

114. In this case there is no formal contact between the head of the agency and the minister. The chief statistician answers to, and receives broad guidance from, the council, whereas the minister instructs, and is advised and reassured by, the council.

Case 2

115. While the chief statistician takes direction from the minister,²⁹ the minister communicates with both the chief statistician and the council. It is also the minister who appoints the members of the council, and it is to him/her that they are ultimately accountable.

Case 3

116. The chief statistician appoints the council. Their advice may be freely shared with the minister, but only the chief statistician is ultimately accountable to the minister.

117. The texts of statistical acts of many countries are crowded with references to a statistical council or commission with real and imaginary powers. Often it is said that the council has either never met or has only had its initial ceremonial meeting. It is actually a loss of credibility to specify in detail what a council should do but not to be able to follow through with constituting it and seeing that it has documented meetings out of which is generated a flow of advice. It follows that in approaching this matter, the chief statistician (or the minister, or both) should:

- Choose from the available list the roles they feel are the most important in the medium term and which will therefore establish the powers assigned to the council;
- Identify those individuals who possess the knowledge and prestige to sit on the council; ensure their availability; and assess the likelihood of their being active and interested members.

2. Membership

118. The body of members on the council should be neither too big nor too small (probably somewhere between 10 and 40 members). Too small a council removes legitimacy, because some perspectives and points of view will not be represented. Too large a council will make meetings and debates unwieldy, difficult to schedule and to summarize, and altogether too costly. Clearly the scale will be a function of the usual variables such as the size of the country, the size of the office, per capita income and social interest in statistics.

119. The members must be selected on the basis that a variety of opinions and perspectives are sought, but by and large they must share an understanding and interest in quantitative analysis of the economy, society and the environment. Thus, academics, business people, government officials and the trade unions should be represented. In

²⁹ Under the Australian Bureau of Statistics Act (1975), has the Australian Statistics Advisory Council is written into the law. The Act specifies that “the functions of the Council are to advise the Minister and the Statistician in relation to: (a) the improvement, extension and coordination of statistical services provided for public purposes in Australia; and (b) annual and longer term priorities and programs of work that should be adopted in relation to major aspects of the provision of those statistical services”.

addition, active and permanent media participation is very important, as the media are a means of disseminating data to the public.

120. In large countries, countries with federal constitutions and countries where there are distinct communities, the council should be a means of making sure that all parties have a voice. While the notion of a council representing diverse interests and opinions may seem contradictory to that of a council of manageable size, both factors must necessarily be taken into account.

3. Chairmanship

121. The personality, range of acquaintances, interest and availability of the council's chairperson are key to the success of the enterprise. If no one is qualified to fill the position as the council is being launched, it is perhaps best to postpone the enterprise until someone with the right characteristics is found.

4. Secretariat

122. There are various schools of thought regarding the secretariat. According to one, the chief statistician is also the secretary ex officio of the council. This view fits with the provisions of case 1 (see figure 1). While the chief statistician would call meetings, propose the agenda (under the guidance of the chairman) and draft minutes, he/she would be in a subordinate position, surrendering to the chair some of the powers normally associated with being chief executive officer. This course of action is most appropriate to situations where the chair is a person of great renown and seniority who is willing to maintain a high-level relationship with the statistical agency but not to work in it as a regular officer. However, these are exceptional circumstances and do not indicate a general rule.

123. The chief statistician may act as an ex officio member, taking active part in the discussions of the council, usually at the invitation of the chair, or he/she may act as any other member would, although the chief statistician would naturally possess more knowledge of the day-to-day activities of the statistical agency. This is a common situation, corresponding to the relationships illustrated in case 3. This situation has the advantage that is more acceptable because the chief statistician does not surrender any of his/her prerogatives while being engaged with other members of the council in a continuing discussion on the agency programme.

124. Another arrangement for the secretariat is to designate as secretary of the council an individual from the central statistical agency, who - as a rule - does this work on a part-time basis. In such an arrangement it is important that it is somehow (e.g., through legislation) made clear to whom the secretary reports, either to the chair of the council or to the chief statistician.

125. In yet another arrangement, the chief statistician may appear before the council only when invited, and then only to answer questions from the members. This is the obvious offshoot of case 2, which is sometimes structured deliberately so that an actively involved minister would be presented with two distinct opinions on any one subject.

126. No assumptions are made about political interference with any of these systems. In all cases, things can go wrong, or alternatively everyone can behave according to the best of expectations. In some instances, the existence of a body placed in between the chief statistician and his/her minister may prove to be an essential insulator for the statistical agency. In others, ministers may try to politicize the council and use it as an additional means to influence the behaviour of the statistical agency. In some instances, as in case 2, a minister may try to dilute a hard view expressed by the chief statistician with a more nuanced opinion arising from the deliberations of the council. In still other cases, a minister may find that his/her efforts are impeded by both the chief statistician and the council. In summary, one cannot predict the behaviour of these systems without placing them in their proper context.

5. Agenda

127. To avoid a dangerous confusion of roles and responsibilities, the chief statistician should exercise careful judgement when proposing an agenda for discussion by the council. For example, he/she should not involve the council in the micromanagement of the statistical agency. Such matters as detailed costs of surveys or improvement of the efficiency of projects at the operational level should be handled within the statistical agency, without external interference.

128. However, the agenda should include such matters as the council's view of the definition of unemployment; the worth of extending activities to the field of the environment at the expense of other statistical fields; or opinions on the most acceptable balance between quality and detail. If the chief statistician keeps on insisting that these are the issues that require outside help, then he/she will not be overrun with superfluous advice, and over time, will see an improvement in the quality and value of the advice that either he/she or the minister receives from the council.

6. Frequency of meetings

129. The nature of the agenda will tend to dictate the frequency of meetings, but a few words of caution are in order. If meetings are too frequent, most members will find them too onerous, and participation will probably lessen. If meetings occur too infrequently (for example, once every two years), the members will tend not to know each other and to have forgotten whatever they learned about the statistical agency during their induction. If the group of participants is relatively small - ten to fifteen - frequent meetings are easier to schedule, whereas with a larger body of members logistics get more complicated. Also, it is best to work with fixed schedules (for example, setting a fixed day of the week) so that meeting dates are predictable.

130. The reports should be publicly available, even if the subjects discussed are not the most engaging. Technology now makes it possible to publicize such reports at low cost. Placing on the agency web site a copy of the agenda, a summary of the decisions made and a list of actual participants will help to demystify the work conducted by the statistical agency and national statistical council.

*7. Advisory committees*³⁰

131. In addition to the national statistical council, it has been found in many countries to be useful to form advisory committees.³¹ In theory, these advisory committees could meet regarding a multitude of matters, but in practice they are most often adept at dealing with technical issues. Thus, such committees tend to be specifically oriented towards key problems of measurement such as replacing an outmoded way of measuring the flows into the labour market, estimating the productivity of sectors that have no priced output, dealing with the production of the informal sector and determining whether the CPI has a bias. The difference between these committees and the ones described in the paragraphs below is that while their opinion is authoritative they seldom deal with issues that are key to the survival of the statistical agency. Whereas certain ad hoc committees or commissions are convened in response to a crisis, advisory committees of the nature described here are designed mostly to avoid crises rather than to manage them.

132. Many countries have more than one such committee. The number of advisory committees depends largely on each country's capacity to support them; on the size of the community of experts sufficiently interested to take part in such discussions; and on the capacity of the agency to take notice of expert opinion and to institute recommendations where these are found to be appropriate. One benefit of such committees is that they help narrow the distance between academic and research statisticians on the one hand and practising government statisticians on the other hand, since many of the participants in such committees come from academic circles. Academic interest and participation in solving key problems of measurement narrows the gap between the two communities, and keeps official statisticians in close contact with intellectual advances that might contribute to their various branches of specialization.

133. Advisory committees have other advantages. If their membership includes interested government officials, they improve the sense of policy relevance of current statistics. If official data are criticized because of their conceptual or methodological inadequacy, advisory committees serve as sources of respected advice, as well as protection in the face of unfair criticism. Moreover, as additional friends of the statistical agency, they contribute to its reputation as well as to its capacity to reach out.

8. Ad hoc bodies

134. The creation of an ad hoc body should be reserved for crisis situations. It would be pointless to convene an authoritative body chaired by someone with a great deal of prestige, whose opinion would have to be taken into consideration by the Government if the problem under review were not of appropriate importance. For example, if users were

³⁰ The use of the term committee here should not be confused with the prevalent use of the word "committee" in States members of the Commonwealth of Independent States to denote the central statistical agency.

³¹ Sometimes such committees report to the statistical agency, and in other cases to the national statistical council. For example, the Central Commission for Statistics in the Netherlands (the equivalent of a national statistical council) has about 25 standing advisory committees that handle a wide range of subject-matter areas.

concerned that calculation of the GDP accounts were biased or plainly wrong, the very essence of economic measurement would be affected. If not promptly addressed by a dispassionate group of experts at the highest level, such doubts could profoundly threaten the credibility of all economic figures published by the statistical agency. Two general points should be mentioned in relation to these advisory bodies:

- The membership needs to come from outside the central statistical agency;
- The reporting relationship of advisory and ad hoc committees varies considerably among countries and depends upon the circumstances of each individual country.

E. The law

“The subject of statistical legislation can be reduced to two major issues: the compulsory aspect, that is, the power the Government asserts, through the statistical agency, to collect data; and the guarantee it provides for safeguarding the confidentiality of the information collected from individual respondents”.³²

135. Laws regarding statistical agencies are largely similar, although the wording may differ: the State (or the Government, people’s assembly, etc.) grants certain rights to a body, hereinafter designated as a statistical agency. In the law, this body’s organic structure is explicitly laid out, including the requirements for the person at its head; the constraints under which it is supposed to operate; and the accountability that prevents it from abusing its rights or acting arbitrarily. The law dictates what the statistical agency is expected to do with the information respondents submit to it, and for which it is accountable. The community of respondents is asked to comply with the statistical agency’s demands for information so long as they can be justified in the name of the objectives set by the law. In exchange for intrusion upon privacy rights, the statistical agency is required to safeguard respondents’ information. If the agency breaks this commitment, its officers are subject to certain sanctions. If respondents do not comply, they too are subject to certain sanctions. While laws differ from each other in length, style, detail, and scope, if they do not cover the fundamental points outlined above, they are incomplete.

136. The 1954 *Handbook* includes an exhaustive list of subjects that may be covered by the law. Consulting the *Handbook* in this regard is worthwhile, partly as a matter of historical interest and partly because some heads of agency may still find it useful as a checklist if they entertain any wishes to get their own law changed. Annex I of the present *Handbook* contains a model statistical law.

1. Main Actors

137. Usually the law defines the main actors and their rights and accountabilities. In the case of the legal provisions for an official statistical activity, to be referred to as a “statistics act,” those actors are:

³² 1980 *Handbook*, pp. 36 ff.

- The minister
- The chief statistician
- The statistical agency and its staff
- The agency responsible for the coordination of the statistical system
- The respondents

138. The statistics act will also define a set of relationships with other bodies that could include:

- Other government offices
- International or supranational institutions
- Professional societies
- Trade and other associations incidental to statistical activity

139. In the case of countries with federal constitutions, the act will define the relationship between the federal statistical agency, the statistical agencies located in the Governments of members of the federation and other government agencies of the members of the federation.

2. The law: short or long

140. The length of the law is initially a matter of preference, but its implications are real and subtle. A lengthy law stems from the desire to provide it with sufficient detail to avoid political arbitrariness once it has been implemented and is acted upon. For example, specifying in detail the membership of the coordinating agency or of the national statistical council guards against its manipulation for political favours or nepotism. However, the more detail is added to the law, the less it is able to adjust to changing circumstances. Over time, environmental changes and other unforeseen circumstances would require legal changes and it is always very difficult to awaken political interest in modifying a statistics act.

141. Both cursory and detailed laws offer benefits. In some situations, a very generally formulated law that gives a great deal of flexibility to the statistical agency has worked well. Conversely, lengthy and painstakingly detailed laws have afforded key actors a great deal of protection. Of course, there are drawbacks in both cases. What this suggests is that a workable compromise between these two possibilities should be found and that the success of the lawmaker lies in getting the compromise right.

3. The law: deterrence and enforcement

142. Legal power to demand response, accompanied by legal sanction for failure to respond, can do much to ensure high response rates that are in turn essential for the overall quality of statistics. Nevertheless, the matter is not as simple as that. In fact, the existence of legal powers to ensure compliance inherently serves as a formal deterrent. In most countries where such powers are well defined in law, the statistical agency has never used them or else has used them very, very occasionally.

143. Today the usual pattern is to operate a mixed system, either tacitly or openly. Mixing options take various forms. One is to regard all inquiries from enterprises as compulsory and the law may as well be unambiguous on this matter. At the same time, all surveys of persons or households are regarded as voluntary. Whether this is stated openly or only if challenged depends to a great extent on the political and legal environment and the way the public views invasions of privacy. If there is an official protector of privacy - an ombudsman, for example - the chief statistician may be unwilling to risk all household inquiries for the sake of a Pyrrhic victory in any one of them: there is no known way of legally countering a campaign of civil disobedience in matters of statistical surveying.

144. Whatever the system, although cooperative relations will play a preponderant role in determining response rates, the law may be a necessary condition upon which to build such relations.

4. Access to information protected by other laws

145. It is best if the statistics act makes clear provision for the statistical agency's right of access to other government data holdings. This should be done partly to streamline government operations but, more importantly, to alleviate excessive paperwork on the part of respondents.

146. The right of access by the statistical agency to administrative holdings of information useful for statistical purposes should be explicitly recognized as an exception in the legislation that protects such holdings or in general, administrative registers. An ideal state of affairs is one of reciprocity, where the statistical legislation lays down the rights and conditions of access, and the specific legislation that protects administrative holdings, wherever they may be within Government, recognizes as an exception the right of access by the statistical agency for statistical purposes.

5. Legal advice

147. Even though the structure and content of a statistics act should be straightforward, a chief statistician should have access to legal advice, preferably a specialized legal adviser who is an expert in the interpretation of the statistics act and in the treatment of its various exceptions. The legal adviser will be of inordinate value in cases of conflict between the statistics act's provisions for rights of access and the formal restrictions embodied in other acts.

6. Special legal arrangements in decentralized systems

148. In the case of decentralized systems, the statistical act should apply to all the members of the statistical system. For example, if a statistical agency or research department is located within the central bank, is its legal authority to collect data from other banks determined by the general authority of the central bank or by a specific law or regulation authorizing the responsible department to collect supplementary information for statistical purposes? If there are discrete statistical agencies in the ministries of transportation, agriculture, public works, interior and so on, what are their legal rights and restrictions in terms of the collection of data, access to microdata and the form in which individual records are stored and accessed? How does the central statistical agency decide whether the particular cell is or should be a bona fide member of the statistical system? Ideally, the following minimum legal provisions would apply:

- All members of a statistical system should have a legal basis for their collection operations;
- All members should have provisions defining their legitimacy, accountability and obligation to hold individual information in trust, as well as the sanctions to be applied if those obligations are not heeded;
- All members should be bound to the same rules and safeguards under which individual information can be shared for purposes of statistical integration and generally for effective analytical work;
- The act should contain provisions acknowledging the need for, and definition of, statistical coordination, as well as guidelines on how it is carried out.

F. Financing the statistical system

149. This section considers, from a general perspective, who should bear the financial burden of producing statistics. Although the two previous versions of the *Handbook* covered this subject only in the broadest terms, it is now generally felt that adequate funding of statistics is a key issue in sustained statistical capacity-building around the globe. Of course, the meaning of “adequate” will always be the subject of debate, and even in developed countries ongoing budgetary pressures make priority-setting in statistical programmes a fact of life. Nevertheless, few would argue that, in general terms, the funding of statistics in developed countries is inadequate. In contrast, the situation is entirely different in developing and so-called “transition” countries.

150. On a philosophical level, there has been some discussion of the financial burden and proper allocation of the cost of official statistics. Basically, there are two poles (with a wide range in between): (a) the Government pays for information that is needed for decision-making, is a public good or is needed to inform the electorate, and it provides this information free of charge to the public (or at most for the marginal cost of dissemination); or (b) the Government collects and pays for the information that it needs

primarily for its own business; the costs of collecting, processing and dissemination any other information should be borne by the user.

151. Something of a watershed in the discussion of these two approaches has been the Rayner Report³³ in the United Kingdom, but it should be noted that the view expressed in (b) above (which is the gist of that report) has since fallen out of favour because it is incompatible with the principles of political transparency and accountability. However, some of the elements in the Rayner report, such as the introduction of payments between departments as a mechanism for improving the allocation of resources, have since been adopted by some offices. It should be recognized that such questions are mostly relevant for countries where the use of statistics is firmly anchored in tradition; where the community of quantitative analysis both in and outside the Government is considerable; where political decisions are largely evidence-based and statistics are an integral part of this evidence; and where the allocation of funds and transfers among the parts of the community are driven by statistical measures.

1. Sources of finance

152. On a more practical level it is useful, first of all, to look at the two main sources for the financing of official statistics: (a) appropriations through the government budget, both for the central statistical agency (if there is any) and for “statistical cells” in ministries; and (b) revenue that statistical offices generate by selling products and services at market prices.

153. The first source is far more important than the second. Few statistical offices generate more than 10-20 per cent of their “income” from sales. In addition, in quite a few countries, the revenue that statistical offices generate cannot be used for their own operations but goes directly to the treasury.

154. The main questions concerning financing that are of interest today include:

- What information is placed in the public domain free of charge or at the marginal cost of dissemination and what information will be provided for a fee;
- If information is provided for a fee, what should the charges be based on? How does an agency that is a monopoly guard against the abuse of its powers;
- Should charges apply to intragovernmental purchases/sales of special information.

155. These questions have been complicated by the fact that conventional publications are no longer the main vehicle for the dissemination of statistics, but rather the CD-ROM or the statistical agency’s web site on the Internet.

³³ Report to the Prime Minister by Sir Derek Rayner, London 1980. See also *Government Statistical Services*, Cmdr 8236 (London, Her Majesty’s Stationery Office).

2. Financing through government budgets

156. Although, on the one hand, the process of securing sufficient government funding for statistical organizations may be highly country-specific, on the other hand, the procedures that are actually followed have many similarities. First of all, it is important for funding to be based on clear, systematic, transparent multiannual and annual work programs. In some countries, particularly in developing countries and those in transition, it is also important to develop and promulgate a long-term “master plan”³⁴ in the appropriate government circles. Secondly, it is vital for the statistical agency (or agencies) to mobilize sufficient political support from their user community. A statistics council may also be an important instrument to achieve such support. Thirdly, in securing funding, it is very helpful if the statistical agency is seen as a well-managed organization that is proficient in planning and cost-accounting and in producing clear management reports that show progress, income and expenditure, under- and overspending, and so on.

3. Market pricing of goods and services

157. Several considerations favour allowing a statistical agency to supplement its budget by the sale of goods and services at market prices.

Box 4. Two key definitions: goods and services

Goods, or “information products” are self-contained arrays of quantitative information, with or without interpretation, which can be stored for future retrieval. The medium in which these arrays are recorded is immaterial. Thus, such “goods” might include a yearbook of national accounts; a CD-ROM with the standard industrial classification; and tables on exports and imports by commodity groupings, downloadable from a web site.

Services are activities carried out by the statistical agency to create a statistical information product. Examples of “services” include providing an algorithm for the selection of a sample of small businesses from a shared register; testing for residual disclosure in a particular table; and testing a time series to see if it meets a set of conditions that makes it eligible for seasonal adjustment.

158. First of all, the sale of such goods and services gives some assurance that the entire community is not funding a specialized commodity that is of interest only to a select number of users. Secondly, allowing statistical agencies to keep the proceeds of their sales of services provides an incentive for them to take advantage of unused capacity. Having such flexibility would prevent the user organization from developing its own survey capacity, with all the duplication of effort this could represent. Thirdly, it may promote a user-oriented culture in statistical organizations.

³⁴ In the cooperation programmes of the European Union, such a master plan is usually called a multiannual integrated statistical programme (MISP).

Conclusions

An examination of the classification of statistical systems favours the creation of a stand-alone institute or bureau. It is better to attach a recognizable name to the production of official statistics than to disseminate them anonymously or too discreetly. In recent years, budgetary problems affecting central Governments have necessitated structures in which the effective coordinating power lies in the hands of the research departments of central banks.

There is no question that concentration and critical mass provide opportunities and means of action that dispersion or fragmentation hinder. Even so, the expense and legal impediments related to the process (as distinct from the state) of centralization may be such that its feasibility is limited. In those cases where the head of a central statistical agency is thwarted in his/her attempts to reduce the fragmentation of the system, but wants to derive the greatest benefit from coordination, several tools are available, all of which can be tried in some degree. They include, in addition to mobilizing political support:

- The creation of a national statistical council
- The coordination of budgetary allocations for statistical activities
- The management of the corps of statisticians in the public sector
- The international exchange of staff
- Data collection approval
- International standards

Strong leadership is key to the effective performance of a modern statistical agency. In order to attract good leadership, the job must have the right status. Chief statisticians must demonstrate their objectivity and impartiality by acting independently of political controversy, but at the same time must maintain close contact with their peers in other ministries. Chief statisticians must display a rare combination of professional and managerial talents, although the proportions of each will vary according to the objective situation. Governments must not appear to be frivolous or arbitrary in demanding that the chief statistician resign if need arises, nor should they allow the continuation of a state of affairs in which energy and inventiveness have long been exhausted. Lastly, the capacity of a chief statistician can be augmented through intensive contacts with his/her peers abroad.

Securing stable (and in the case of developing countries increased) financing for statistics is an important responsibility for the chief statistician. To obtain political support for stable finances, setting up sound planning instruments (such as annual and long-term work programmes) is helpful, as well as promoting the image of statistical offices as well-managed organizations.