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THE SETTING OF PRIORITIES IN NATIONAL STATISTICS:
A REVIEW OF MAJOR ISSUES

Report of the Secretary-General

SUMMARY

At its nineteenth session, the Commission requested that the subject of statistical organization should be on the agenda for the twentieth session, with special emphasis on the ways of deciding on priorities in national statistical programmes. The present document, prepared in response to that request, takes the view that strict quantitative cost-benefit techniques are impossible to apply, but that the determination of priorities and the analysis of the costs and benefits should be better systematized and made more explicit than they are at present.

Section II discusses why the topic is important (paras. 9-15); section III considers the kinds of priority choices that have to be (paras. 16-31); section IV considers ways of looking at costs and benefits and contains a framework for a disciplined approach (paras. 32-73); section V contains some concluding remarks (paras. 74-78).

A number of issues are presented to the Commission for discussion and a suggestion for further work is offered, in section I (paras. 7-8).

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INTRODUCTION

1. No conference or document on statistical organization is complete without a section on ways of determining priorities, and there is now a sizable literature. 1/ But in spite of this, those responsible for running statistical offices remain uncertain about their approach to priority-setting and are seeking further examination of the topic. This emerged afresh when the Statistical Commission at its nineteenth session, in 1976 agreed that the topic "Statistical Organization" should be included in the agenda of the Commission at its next session, with special emphasis on ways and means of deciding on priorities in statistical programmes. 2/ The present document was prepared in response to that request. 3/

2. The interest in the subject is understandable enough, but so is the frustration. For the head of a statistical office and the senior colleagues, decisions on priorities are a constant and central activity. Each time the head gives the green, or red, light to a new or expanded survey, an extension of an existing series, an improvement in timeliness, a staff appointment, a computer enhancement or indeed any statistical budget item, he is making a decision on priorities. The decision may be implicit or explicit; it may be entirely his own or the result of pressure from his political masters; and it will always be the result of many influences, some subjective, some objective. Moreover, every time there is a major unexpected political, economic or social development (e.g., an energy crisis) or a major shift in economic or social policy (e.g., a determined campaign to reduce inflation or a change in educational policy priorities), long-term statistical priorities may be disturbed by new demands and pressures to have them reassessed. So, in one way or another, priority-setting is a crucial and continuing responsibility for statistical management. But only to a limited extent can it be "scientifically" based in the sense that appeals to a statistician.

1/ See National Research Council, Setting Statistical Priorities (Washington, D.C., National Academy of Sciences, 1976) which contains, besides an extensive report on the subject, papers by W. E. Duffett, J. W. Duncan, D. M. Gilford, R. Savage and others, and extensive bibliographies. See also S. A. Goldberg, "The demand for official statistics and their utilization in Canada with special reference to the role of the national accounts", Bulletin of the International Statistical Institute (Sydney), vol. XLII, book 2 (1967); W. E. Duffett and S. A. Goldberg, "Planning and co-ordination of statistical programs in a central statistical office", Bulletin of the International Statistical Institute (Washington, D.C.), vol. XLIV, book 1 (1971); and the relevant chapter of Handbook of Statistical Organization (United Nations publication, to be issued), prepared by P. J. Bjerve, acting as consultant to the United Nations. XII

2/ Official Records of the Economic and Social Council, Sixty-second Session, Supplement No. 2 (E/5910), para. 142 (d).

3/ Prepared by Sir Claus Moser (Director of the Central Statistical Office, London), acting as consultant to the United Nations.

3. Hence the frustration. Ever since the theology of cost-benefit analysis was developed, top management have felt that they should be applying it to statistical choices, that costs and benefits should be neatly quantified, enabling different projects to be contrasted in strict cost-benefit terms and decisions thus made. To the extent that they don't, statistical management feel frustrated, almost guilty.

4. Such guilt and frustration are misplaced. Cost-benefit analysis in the strict quantitative sense is no longer, even in policy areas, regarded as the panacea it was felt to be in the early, naive days. And as regards its application to statistical priorities, many papers have stressed that it is hard, perhaps impossible, to apply and that less rigorous approaches should be used. Unfortunately, they have often gone on to imply that, given further research and development, feasible quantitative techniques will be created, and so the door is left open and the frustration remains.

5. The present document takes the view that strict quantitative cost-benefit techniques, as traditionally defined, are impossible to apply and their pursuit a waste of effort, but that the process of determining priorities and analysing the pros and cons of developments should be better systematized and made more explicit than it is at present. The purpose of this document is to outline such an approach and to provide a framework of issues that arise in making priority choices. No new techniques are offered and no adequate case studies are available for illustration. But even without these, it is possible to show how a typical national statistical office can approach the job of deciding on priorities.

6. Section II discusses why the topic is important and this is followed in section III by a consideration of the kinds of priority choices that have to be made. Section IV considers, in turn, ways of looking at costs and at benefits and outlines a framework for a disciplined approach. Section V contains concluding remarks.

I. ACTION BY THE COMMISSION

7. The Commission may wish to discuss:

(a) Whether the general approach to priority-setting advanced in the present document seems right, or whether an alternative approach is preferable;

(b) Which of the balances in section III below are most important for a statistical system;

(c) What approach to the costing of statistical programmes should be pursued for setting priorities - how detailed, frequent, comprehensive etc.;

(d) What are the best ways of assessing the "stakes" for particular statistical projects;

(e) What are the best ways of studying the bearing of different kinds of data upon decisions;

(f) What are the pros and cons - and the difficulties - of drawing up over-all statistical plans and budgets; and

(g) What is the case for using the price mechanism more widely for setting priorities.

8. Finally, the Commission may wish to ask the Statistical Office to undertake national case studies on ways of setting priorities and analysing the relation of statistics to decision-making.

II. THE IMPORTANCE OF PRIORITIES

9. Statistical offices are everywhere under pressure. The demands for statistics have increased relentlessly over recent decades, are increasing and will continue to increase. Governments are typically trying to steer or "tune" economies, with all the pressures for improved macro-statistical information that this implies. Economic and social policies are expected to be well based and researched and their consequences well monitored. Policy makers are increasingly sophisticated in economic matters, and this translates itself into demands for more accurate, timely, sensitive data. In social policy, interest in a sound data base is more recent but is now growing dramatically and is shown in the pressure for social indicators, the setting up of frameworks of integrated social and demographic statistics, regular surveys to monitor social changes, policies, needs and so forth. There are pressures everywhere for better detailed data, both in the sense of data for small areas and of information for particular sectors of industry, population groups and so forth. At the other end of the scale, international pressures on statistical offices are steadily growing, especially in countries which belong to political and administrative communities such as the European Economic Community (EEC) or the Council for Mutual Economic Assistance (CMEA).

10. These increasing demands are one side of the coin. The other is that resources available for statistical offices are not increasing in parallel. Public expenditure is everywhere under stricter control and particularly civil service expenditure and manpower. Within this, official statistical activities are at least as vulnerable as other parts. In most countries, expenditure on statistics has increased substantially and is now large enough to attract public and government attention and deserve the careful scrutiny of statistical management. In many countries, the next few years will present a tough climate and increased demands for resources will need to be powerfully justified to show that the Government is likely to derive value for money. In addition, the scarcity of well qualified people to staff statistical systems will remain a widespread constraint on meeting the demands pressing in on statistical offices.

11. Thus it is realistic, as well as a good discipline, to think of the task of priority-setting in the context of increasing demands for more and better statistics. at macro and micro levels, in a situation of increasing resource constraints.

12. Nor will shortage of resources, in the sense of statistical skills, money, computers and so forth, be the only constraint. Public willingness to fill in forms and collaborate in inquiries is showing resistance in many countries; and any realistic appraisal of priorities must have the response burden as much in mind as limitations of cash and people.

13. In short, priority-setting, which is another term for resource allocation, will become more important than ever, both as a basis for fighting for resources and for allocating them among competing tasks.

14. The nature of the task will be different in different societies, stages of economic development and statistical systems. It may be simplest in centrally planned economies in so far as statistical priorities flow directly from, indeed are an integral part of, over-all economic and social plans. In the market economies there is no such clear starting point. As to stages of development, priority decisions will be easier in the less developed countries, if only because the needs for basic statistical data (e.g., for population or trade figures) will have a natural priority, whereas in advanced systems statistical improvements will be more specialized and harder to compare for priority; there will also be more interest among non-governmental users, which again makes priority decisions harder. Again the task will be harder in a decentralized than in a centralized system, because in the former there will be more (departmental) user pressures influencing priorities and less prospect of effective central determination. In this sense, there is less freedom for settling over-all priorities in a decentralized system. Indeed the more fragmented a statistical system, departmentally or geographically, the tougher the task.

15. But though the nature of the approach may differ, it is everywhere crucial. And, as has already been said, the task falls squarely on statistical management. Of course, attention will have to be paid to all kinds of users and pressures, from within the Government (e.g., ministers, other officials, committees), user groups, national statistical councils and so forth, and the freedom of the statistical managers to decide on priorities will vary from system to system and from one time to another. But, as far as possible, the priority decisions should be made by the top statistical management, with information on pressures and needs being absorbed at different levels of the system and put together, by statistical management, into an integrated plan.

III. TYPES OF CHOICES

16. Decisions on priorities range from large issues affecting a whole data system to questions relating to specific programmes or indeed series. Some are long-term, some short-term; some complex, others simple. The range of problems becomes clearer if we categorize the kinds of choices statistical directorates are regularly confronted with.

A. Infrastructure versus immediate statistical improvements

17. By infrastructure is meant both the capital equipment needed by the statistical services - from buildings and computers to pencil sharpeners - and the human and other resources manning it. Thus a computer facility or a household survey capability are part of the infrastructure. There are often choices to be made between strengthening these basic aspects, which will in due course help towards better statistics, and immediate statistical improvements. But the two cannot be compared in cost-benefit terms, one relating to long-term investments, the other to immediate specific improvements in output.

B. Statistical systems versus specific series

18. The essence of statistics is to "connect" facts, and it is the greatest achievement of the statistical fraternity, world-wide, that so much progress has been made in elaborating statistical systems. The national income and expenditure accounts are the crowning example, together with other related macro-economic accounts (balance of payments, input-output tables). On the social statistics side, progress is also beginning to be made in devising frameworks of social and demographic statistics, though this will never achieve the same unity and conceptual tightness as the macro-economic accounts.

19. At the centre of the problem of priority-setting are the choices between developing or improving a series because it is needed for a specific purpose and improving it because it strengthens a link within a statistical system. Often the pressure for the former comes from specific users (perhaps within the government), while for the latter - taking a more long-term view - the main pressure will come from within the statistical system. Of course, the two purposes often reinforce one another. It may be decided to improve the stock or the savings figures in the national accounts both because they are weak links in the systems and because they are wanted in their own right. But a crucial objective in priority-setting is to ensure that the long-term build-up of data systems receives and retains due priority and is not repeatedly deflected into ad hoc projects which don't contribute to the integrity and usefulness of the data base in a permanent way.

C. Subject-matter balances

20. Cutting across this, there are always strategic choices between improving statistics in one field rather than another - health rather than balance of payments, education rather than energy. The choice will - and should - be influenced not only by the long-term strategy for improving data but also by broad political, economic and social considerations reflecting the issues of public concern at the time. These may represent short-term (albeit important) pressures, and may conflict with long-term strategy to improve a particular subject area where statistics are now weak. There may be even broader balances to be struck, e.g., between social and demographic statistics. None of these choices can be helped by traditional cost-benefit techniques.

D. New versus old

21. Within a particular subject area - say, health or balance of payments, there will be pressures (both from the users and the producers of the data) to fill data gaps and enlarge the statistical coverage. This is how statistical systems are improved and enlarged. If resources are tight, new projects may mean the dropping of old ones, and the continuing quest for possibilities of eliminating old series, surveys etc. is a key part of priority.

22. In practice existing statistics are seldom discontinued. The reason may be that they become more useful as time series or that they may be integrated with other series and their discontinuation may reduce the value of the latter. Also continuation of a series is less costly than its initiation both to form-fillers and to the statistical office. Thus, in general, available statistics are given high priority relative to new statistics. However, even if discontinuation does not take place, one should regularly ask whether one can get more value by improving existing data than by adding new ones, and whether particular series or surveys could be done less frequently, on a smaller scale etc.

E. Accuracy versus timeliness versus detail

23. Even the decision to improve an existing series is not straightforward. There are crucial choices. One can decide to improve its accuracy or its timeliness or its detail or its frequency. Different improvements will bear different costs and have different uses. These are often the hardest choices to make.

F. Stages of the statistical process

24. The quality of the final product is built up through the various stages from the original design to final interpretation. It is a matter for decision in the allocation of resources whether to strengthen stage A rather than stage B; whether to put more into improving the basic data or into research analysis or dissemination. For these choices, a continuous data-improvement strategy is needed, bearing in mind

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that statistical series, left to themselves, will deteriorate with time and that a continuing overhaul programme is needed. In resource terms this can be expensive (especially at the response end), so that tough choices are unavoidable.

G. Special collection versus by-products

25. There are constantly choices, whether to fill a particular data gap by mounting a new survey, adding to an existing one or trying to exploit administrative data systems better. These alternatives are generally in descending order of cost and also (probably) of relevance and helpfulness. Choices between them are central in a data-improvement programme.

H. Censuses and surveys

26. A related choice in any long-term statistical strategy is between comprehensive censuses (whether of population, production or employment) and sample surveys and, if the latter, between continuing and ad hoc surveys and between multipurpose and single-purpose surveys. There is a subsidiary choice between compulsory and voluntary inquiries. These different operations can make very different contributions to data systems and their resources implications will vary enormously.

I. Macro versus micro data

27. Another type of choice is that between improvements in macro data, i.e., data which contribute mainly to broad national economic or social issues and developments in disaggregated data, e.g., for small areas or population groups.

28. More extreme still, there is the building up of micro-data sets which can flexibly serve many purposes. Their contribution is made possible by the modern computer and their contribution to official statistical systems has as yet hardly begun and requires a basic change in attitudes, training and skills. ^{4/} Setting up micro-data systems is a long-term and complex task and involves explicit priority choices.

J. Government versus other users

29. One of the central problems for any statistical system is how much emphasis to give to central government users and how much to the rest of the community - industry, unions, state and local governments, the academic and research world, the general public. This broad stance goes to the roots of priority-setting, affecting

^{4/} See "Methods of collecting, organizing and retrieving social statistics to achieve integration" (E/CN.3/516), also before the Commission.

not only which statistics are to be given priority but also how much of available resources to put into dissemination, publications and so forth. It also colours the weight to be given to the influence of users other than Governments.

K. Users and suppliers of data

30. Choices between data improvements must take into account not only their potential values or costs but also their implications for the suppliers of data. The form-filling burden must be minimized and privacy and confidentiality aspects fully weighted.

L. International versus national pressures

31. Increasingly, international organizations seek improvements in national statistics and - especially where countries are part of international administrative structures (e.g., EEC) - there may be choices between improvements needed for these and those more important at the national level.

IV. COSTS AND BENEFITS

32. The types of choices confronting a statistical system, described in section III above, show how limited the application of quantitative cost-benefits analysis must be. Many of the decisions - infrastructure versus statistical improvements, crime statistics versus input-output tables and so forth - are between chalk and cheese, and any pretence that one is comparing like with like would be positively misleading.

33. The basic point is that cost-benefit analysis works best for specific projects (e.g., an airport) where both the costs and the benefits can be clearly and specifically enunciated; or for situations where the choice is between closely comparable alternatives; and where the decision is specific. Statistical programmes are made up of many parts, which are essentially interlocking, not only in resource terms but also in substance, and which differ in kind, not just degree. Applying cost-benefit techniques only to parts of the total programme can result in unbalanced decisions.

34. But, however great the obstacles to a cost-benefit approach, viewed mechanistically, a rational approach to setting priorities must involve a careful look at costs and a careful look at benefits.

A. Costs

35. Costs are easier to assess than benefits, and they will be discussed more briefly.

36. Most statistical offices cost their statistical operations and estimate the costs of future programmes. Those that don't, should. There is no great difficulty in principle. For most projects and programmes, the costs can be built up stage by stage. The main component will be staff, and costing will involve time-sheets so that project times can be properly allocated. Non-staff costs can be estimated directly or by implied grossing-up (by formulae) from staff costs. Time-sheets can be applied to all grades of the office or confined to certain levels.

37. There are a number of typical problems that arise, none of them major obstacles:

(a) How carefully to try to apportion overheads; this will depend on the sophistication and accuracy desired;

(b) How carefully to apportion the time of people engaged on many projects as will be the case with all senior personnel;

(c) How to allocate the costs contributing indirectly to a series (e.g., research), which are a type of overhead;

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(d) How to assess future costs for new projects without direct precedents;

(e) How to build up the costs of major systems (e.g., the national accounts) or "secondary" projects (e.g., publications);

(f) In seeking cost-estimates for future projects, whether to be comprehensive or to concentrate on major projects (over a certain size or expenditure).

38. There is also the question of classification. Costs can be classified according to subject-matter (e.g., crime statistics) and/or function (e.g., processing) and/or project (e.g., labour costs survey). The choice will depend on the purpose of the costing.

39. Enough experience has been accumulated in statistical offices to show how the costs of statistical projects can be estimated, in components (staff, machines, overheads etc.) and in total. More difficult is the cost that falls on respondents, which is usually not covered. Especially with new projects where, say, a firm doesn't have the data in the required form, this cost can be heavy. There is no case for excluding it from priority decisions.

40. Costing statistical projects has many purposes. First, it is needed for establishing an over-all statistical budget, for parliamentary votes and estimates and so forth. Secondly, it is required in making the case for the over-all allocation of resources to statistics, which must be well based in terms of resource implications. That is no more than good management. Thirdly, it is necessary as a basis for achieving office efficiency. And, finally, it is needed for monitoring the progress of projects and for resource-planning and priority decisions.

41. For this last purpose, which alone is the concern of the present document, less detail and refinement are required than for the others, so that on the issues listed in paragraph 37 above, the "broader-brush" alternatives will generally suffice. This is because the other side of the picture - benefits - is bound to be broad, and highly refined cost figures may be a waste of effort. Some statistical offices, setting out towards the cost-benefit millenium, have launched elaborate cost exercises and found that, because of the roughness of the benefit side, they have reached only very obvious conclusions - and often too late to influence decisions, which has hardly justified the effort. Since statistical managers and their staff are everywhere overstretched, the additional load of costing should be imposed only to the extent that the results will be useful, usable and used. On the other hand, the actual task of costing should come easily to the statistician, so that one need not be too protective.

B. Benefits

42. In theory, the use of cost-benefit techniques would involve identifying the anticipated benefits of a course of action and, as far as possible, quantifying them. Then the cost-benefit ratios of project A would be compared with those of

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project B or with not pursuing project A. The literature is full of policy applications, but even some of the apparently more specific ones (e.g., for an airport or motorway) have often been failures, because of problems of identifying indirect benefits and also of wildly faulty cost-projections. In addition, even the most sensible and quantitatively researched basis for decision can be - and often is - overruled by political or other pressures.

43. Thus in the United Kingdom, the plan to hold a mid-term census (in 1976), which was based on a careful study of costs and benefits and had been accepted, was cancelled by the Government as part of a sudden and severe set of expenditure cuts. From any cost-benefit angle the decision was a mistake and it has been widely regretted; but it is a matter of political reality that the most carefully justified projects can be thus overturned. In another round of expenditure cuts, a previous decision to introduce a new standard industrial classification compatible with EEC's General Industrial Classification of Economic Activities within the European Communities (NACE) was rapidly reversed, though it was a necessary and desirable development.

44. All the well recognized problems in assessing benefits apply to decisions in statistics as much as to policy choices. And there are additional hazards.

45. First, statistics are an intermediate product, not an end in themselves. Suppose one is trying to decide priorities as between improving statistics on primary education or on secondary education. It might be a real choice, since both improvements relate to the same subject area and probably draw on the same resources. A cost-benefit analysis relating to the respective policies is the task of the educational policy makers (with help from, among others, the statisticians). But the problem of choosing between the respective data improvements on primary and secondary education is derivative in that it requires knowledge of how sensitive the policy decisions are to data of varying accuracy, timeliness and so forth. Statistics are an input to a decision and they need to be thought of rather like raw materials or intermediate products in an input-output analysis.

46. Secondly, many statistical projects are multipurpose in one or both of two senses. One is that they may relate to more than one subject area, such as a multipurpose survey or the macro-economic accounts, which makes the evaluation of benefits complex. The national accounts, for example, serve innumerable purposes, some relating to over-all aggregates (e.g., GNP per head), others to subaggregates, sectors or individual components. And because the parts of the whole are independent, as well as covering different topics, there is no single way of assessing the benefit of the system as a whole while the assessment of individual components only achieves a limited purpose. The other sense in which projects are multipurpose is that they may relate to different levels or types of user. At one extreme, a project may be geared to a specific decision or policy area in government, industry or elsewhere; at the other, it may have as its main, or at least a major, objective to inform the public. This latter type of purpose is impossible to assess in benefit terms, yet it is a vital, even if usually secondary, aim of statistical programmes. To base priorities mainly on the anticipated impact on decisions is realistic and sensible, but it does leave out

a good deal - of concern to outside users - though, as noted below, their needs are in fact often met indirectly by the data provided for decision makers.

47. Thirdly, many statistical programmes have long gestation periods and must, in the nature of things, be decided on long before their outputs are "needed". In fact they create potential benefits and demand rather than being responses to them. One cannot emphasize enough that statistical priorities should not be purely reactive to user demands; the latter arise from, and are stimulated by the building-up of statistical systems themselves.

48. Fourthly, statistical systems - a major part of over-all programmes - are made up of numerous interlocking parts, and the benefit of a particular improvement may be less in itself than for its bearing on linkages and interrelationships. This again adds to the complexity of assessing benefits.

49. The combination of these complications, when added to the general problems of cost-benefit analysis, rules out the application of mechanistic, quantitative techniques.

C. A framework for a disciplined approach

50. This is not to say that priority decisions should be taken haphazardly or on the subjective whims of statistical management. What is needed is an orderly and systematic approach towards priority choices. For all major projects and programmes, a series of facts should be accumulated in as uniform a manner as possible, these being inputs to management decisions which will remain in good measure matters of subjective judgement and insight.

51. What is proposed is a framework for a disciplined approach with various elements being applied (with varying types of difficulty) to all parts of a statistical programme, to special surveys as well as administrative by-products, to single series as well as complex statistical systems, to established as well as new projects.

1. The "cost" discipline

52. This has been discussed above. In brief, each project or development, and as far as possible the entire statistical programme, should be translated into output-related cost estimates. For priority-setting, a broad-brush approach to costs is often adequate. But every project of size or importance should have a cost label attached to it in the plan.

2. The "user" discipline

53. As in any well ordered business, the purpose of each development and project should be clearly defined. This should be in terms of its aimed-for bearing on, e.g.: (a) Policy decisions (in central or regional government, in industry etc.); (b) Policy monitoring (in central or regional government, in industry, etc.); (c) Public information; (d) Research; (e) Improvement of the statistical data

base; and so forth. The more precise the specification of purpose, the better. The easiest purposes to define are those concerned with improvements in the data base, but there are also intermediate ones; the hardest are those related to improving public information rather than the base for specific decisions.

54. The statement of purposes should cover several dimensions. It should summarize general objectives, e.g., "to improve understanding of economic transactions ... by making available estimates of corporate profits on a quarterly basis ...". There should be an indication of why the project is important at this stage and what kinds of decisions would be helped by it. The bearing of the project to any legislative programme should be made explicit as well as its relation to particular public expenditure programmes. The purposes of the various parts of the projects should be specified; and so forth.

55. A related way of defining purposes is in terms of users. The demand for statistics is complex, and it is a vital discipline in priority-setting to categorize and to weigh subjectively the different sources of demand, which will include policy makers, programme managers and evaluators, local authorities, non-governmental users in industry, unions, the academic communities and so forth. Information about user needs (actual or potential) can be gleaned from many sources. There are many types of machinery, including - within government - official or ministerial committees and - for outside users - user committees for specific subject areas, national statistical councils, user conferences and the like. One can also carry out surveys to ascertain user interests, but this is of doubtful value as a guide to potential uses; for one thing, hypothetical questions about potential uses are hazardous, and for another, it is usually hard to translate the choices between alternative developments into simple questions.

56. Perhaps the most important and certainly the most immediate user group is that of the official producers of statistics. Their voice must carry great weight in assessing the relative impact of alternative developments on the long-term improvements of the data base, improvements which may help decision makers only after a substantial interval. Their voice is crucial also in the sense that most users - inside as well as outside government - need positive help from the producers to decide what they need. This is a key role for the producers, which calls for expertise in subject-matter rather than methodology.

57. What has to be done is to detect and identify for a given development who the users might or should be. The categorization will depend on the subject, but the following table gives a good illustration:

Identifying decision makers in education
at various levels of government

<u>Level</u>	<u>Public decisions</u>		<u>Private decisions</u>
	<u>Policy</u>	<u>Administrative</u>	
National	President	Department of Health, Education and Welfare, Education Division, and other executive agencies	Organizations sponsoring private school systems Education-related industries National associations, unions
State	Governors Legislatures Courts Elected super- intendents or boards of education	State departments of education School system officers	Private school system Education industries Education associations, unions
Local	School boards Board of regents Courts	School principals District superintendents College and university presidents	Private schools, business, voters, parents and students Parent-teacher associations and teacher unions

Source: National Research Council, Setting Statistical Priorities
 (Washington, D.C., National Academy of Sciences, 1976), p. 24.

Having identified the main users, one must assess what their needs are. This is not generally a question of whether or not a particular project is wanted at all but an assessment of how detailed, comprehensive, accurate and timely it must be to meet the user's needs. Some users will exert more effective pressure than others and some will, in the nature of things, deserve more attention.

58. Care needs to be exercised in deciding how much weight should be given to user pressures generally. True, user interests must be discovered and made explicit; but the statistical management must at the same time keep to its long-term improvement plans and not be constantly thrown out by user and policy pressures.

Response to policy pressures from individual ministries should not get in the way of long-term data improvements and the development of an integrated and balanced statistical data base.

3. The "burden" discipline

59. Each project should be looked at in terms of its likely burden on suppliers of information. This can mean the burden on other governmental departments and/or local authorities, business firms or individuals. (An improvement in the national accounts desired by a central statistical office can mean much work for all types of respondents.) Other things being equal, improvements involving little burden on outside data suppliers deserve priority over others. In practice, things are not equal, and the point is that an assessment of burden should be regarded as an integral part of priority-setting alongside the assessment of costs and benefits.

4. The "pay-off" discipline

60. The hardest part of the operation is to assess what the importance, usefulness or "pay-off" of a particular development might be. There are several dimensions which a systematic approach should cover.

61. By way of background, the statistical management will - or at least should - be conscious of the major national concerns of the day. The approach should be outward-looking in this sense as well as inward-looking towards the value of improvements for the data base. If energy problems, immigration, equality and so forth are major concerns publicly and politically, they should also be at the front of the statistician's mind: not for immediate deflection of resources from long-established priorities but for the context in which the choices are made. Political-type pressures are a reality and should be recognized as such; and they should, as far as possible, be anticipated by those in charge of statistics. If only because of the long gestation period for statistical improvements, needs must be identified early.

62. Any legislative need for a project must have a bearing on priorities. This is meant in two senses. The most obvious is where the project is itself required under law, such as a population census, which gives the project a clear place in the priority queue. The other, more fundamental, sense is where a policy is to be the subject of legislation and needs better statistics. An example might be a development in housing policy intended to reduce slum conditions or overcrowding: a good data base is needed in preparing the policy and, if it is to be the subject of legislation, that itself influences priority and defines a time schedule.

63. Then there is the question, What is at stake in the decisions or issues to which the data improvement relates? This is the approach emphasized by Shiskin ^{5/} and it is a vital part of priority-setting. In considering choices between

^{5/} Julius Shiskin, "Objectives and priorities in statistical programs", Statistical Reporter (October 1973), pp. 57-66.

different improvements, one should try to assess what is at stake with each of them in public policy terms. Shiskin has repeatedly and rightly stressed the vast importance for economic policy of, e.g., the quarterly estimates of GNP and therefore the crucial importance of the estimates. Goldberg formulated the issues as follows:

"The potential losses which can occur if improper policies result from poor or inadequate statistics are enormous. To illustrate, one might point to the huge amount that would be involved if, due to inadequate statistics, policy decisions were made which gave rise to a short-fall of as little as one per cent in the nation's economic performance below its true capacity - a short-fall which would be cumulative for every year and would not be recoverable when the gap is closed later. In these circumstances the marginal benefit of additional statistical services, in most fields, would undoubtedly be much greater than the most generous estimate of cost." 6/

64. It is always worth trying to put a broad value on the marginal benefits of the statistics. This means analysing how economic decisions are made, how sensitive these are to improvements in, e.g., accuracy and timeliness and how detrimental is the effect of poor data on decision. Such sensitivity analysis is a familiar part of macro-economic forecasting and needs to be applied more generally. In a word, decision analysis should underpin priority-setting. To reach this goal is a slow process, but that need not deter one. What is important is the discipline of constantly assessing what the key economic issues are, which are the ones where most is at stake and where, therefore, the statistical improvements should be concentrated. This should be carried out as an integral part of priority-setting rather than separated off into a research activity.

65. The paragraphs above have looked at priorities in relation to legislation and broad policy issues. A specific way of linking on to the latter is in terms of public expenditure categories. One approach would be to earmark a certain percentage of different departmental programmes for statistical purposes. Superficially, this seems attractive, but it can be misleading and counterproductive. Many policy programmes in a given department range over the interests of other departments and, even if they don't, require data from other subject fields (e.g., education policies need demographic data). Conversely, many, if not most, statistical programmes serve many policy subject areas. Moreover, a financially well-off department does not necessarily need better data than a less well-off one, nor can it necessarily use them better. There are other disadvantages to such a mechanical approach, such as the fact that infrastructure developments do not lend themselves to such a piecemeal way of setting priorities.

66. At the same time, it can be illuminating, as one of several classifications, to categorize statistical programmes similarly to the public expenditure projects with which they may be associated, though it is vitally important to remember that

6/ S. A. Goldberg, loc. cit., p. 964.

there is rarely a one-to-one relationship between the statistical project and the public expenditure project.

67. An example of how to assess the bearing of a statistical project on allocation of public expenditure etc. was related to the proposed 1976 census of population in the United Kingdom. The census is a major tool for governmental decisions and non-governmental research, but this particular analysis concentrated on the former. It concentrated on the relevance of the census results for decisions on governmental spending, including decisions on local provisions (e.g., education or refuse) as well as national ones; and above all on those categories of expenditure the national distribution of which depended on population or other census statistics. The analysis then centred on the pros and cons of a 100 per cent and 10 per cent census for 1976, and proceeded to estimate the effect of errors in population estimates on the welfare bought by particular expenditures. 7/

68. The paragraphs above treat priorities relating to decisions. Even harder to assess is the pay-off relating to public information and research, and it is hard to see how one can assess this except from the representation of outside user interests. Goldberg summarizes the issues as follows:

"Other things being equal, demands have greater chances of becoming effective if they originate from sources which represent the general national interest and, at the same time, can be instrumental in providing the necessary resources to the statistical office. Of major importance, too, is the capability of the originating organizations to lay out the requirements in thoughtful and practical terms and to demonstrate effectively the importance of the information for policy or administrative purposes. This means that demands originating from influential federal government departments, which are sophisticated and professionally oriented in the use of statistics, or which can secure the support of such departments, have the greatest chance of becoming effective. However, to an increasing extent, provincial needs have become a major factor in shaping the content and the direction of statistical programs, reflecting the increasing importance of the provincial governments in the Canadian confederation. While individual demands of the business community and the public at large can frequently be satisfied from available resources and relatively small additions to questionnaires, the cumulative impact of their needs is substantial. It is a fortunate coincidence that most of the demands of the federal and provincial governments represent, at the same time, needs of various sectors of the business community and the public; and the satisfaction of these public demands also results in providing information which satisfy the detailed needs of the private sector." 8/

7/ A full account is given in P. Redfern, "The different role of population censuses and interview surveys particularly in the U.K. context", Bulletin of the International Statistical Institute (Vienna), vol. XLV, book 3 (1973).

8/ S. A. Goldberg, loc. cit., p. 966.

69. The most important task falling to statistical management is the continuous and long-run improvement in the statistical data base (at macro and micro levels). Statistical developments should be assessed in the contribution they are likely to make to, for example, the elaboration of the national accounts or the construction of micro-data sets, or the over-all sets of censuses and surveys or the continuation of regular time series. Statisticians will be familiar with developments in methodology and computer techniques and will be able to take advantage of them in planning improvements. It is their key role. Duncan has suggested a technique for assessing the priority of economic statistical improvements in terms of their likely effect on reducing the error between the preliminary estimate and the final estimate of a component of the accounts. ^{9/} This is a useful consideration, though it must not be the only one. It may be just as important to fill gaps which cause biases (as opposed to other errors) or which represent subaggregates of special interest. What is undeniable is that the macro-economic accounts (and perhaps in the future the social and demographic statistical frameworks) provide a good framework within which to choose priorities; so do econometric models (and models generally). The central point is that the construction and improvement of the over-all data base and the capability it provides for flexible use in dealing with new demands are at the heart of priority-setting. A good example is the data-improvement strategy for the national accounts worked out by the United States Bureau of Economic Analysis and the Office of Federal Statistical Policy and Standards.

70. Another aspect of the "pay-off" discipline is that for any proposed development, there should be a clear conception of the alternative. Is it to do nothing or, say, to postpone the project or to introduce it more gradually or with less accuracy or on a smaller sample? Or is it a choice (as it often should be) of doing something new or continuing something old?

D. Charging

71. One way of settling priorities, not mentioned so far, is the use of the price mechanism. In principle, it is feasible to charge customers for statistical services and let the forces of supply and demand decide what is done.

72. Up to a point, the use of charges is sensible as a way of recouping costs. Thus publications are charged for and so, in most systems, are special tabulations or analyses. Repayment systems for specific surveys or projects are also widespread, and there are statistical systems (e.g., in Sweden) where the survey organization is put on a more or less "pay-as-you-go" basis.

73. The use of the price mechanism is practicable where one is dealing with specific projects for specific users. But most statistical projects are not like that. Some of the most important projects, like the national accounts or retail

^{9/} J. W. Duncan, "Priority setting in the coming decade (survey linkage and integration)" in Statistical Surveys in the Coming Decade, J. W. Duncan, ed. (to be published for the Economic Commission for Europe by Pergamon Press, 1978), pp. 104-105. ^(CN)

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price indices, would be much too expensive to be financed by specific customers, while at the same time it would be impossible to divide their costs among a number of users. There is no avoiding the conclusion that a major part of a statistical data base must be built up and financed as a central government responsibility and should not be subject to the price mechanism. Whether prices should be used for "optional" extensions of the data base is another matter. One can argue, for instance, that detailed data for particular industries should be paid for by users, thus adding revenue to the central statistical budget. But with such a "mixed" system, there is the danger that the part governed by the price mechanism may swamp the other, non-price part, removing crucial resources from it. Moreover, when payers withdraw financial support, the series may be in jeopardy even though it may be useful or even essential to the system as a whole. In sum, charging for statistical outputs is not a major instrument for determining priorities.

V. CONCLUDING REMARKS

74. What has been described in the present document is no more than a systematic, orderly and explicit approach to the setting of priorities.; The management of the statistical office, whose job this is, will be subject to pressure from large numbers and types of users, from within government and outside. It will need to recognize these users explicitly and decide what weight to give to their various demands, but with a particular eye to satisfying the needs of government. There will be contrary pressures from the form-fillers. The producers themselves are key customers for their output, and the long-term development of the data base should always be at the centre of their concerns. Deciding priorities is thus a multisided process of negotiation, both within the statistical system and between it and outside users.

75. In arriving at the priority judgments, the various disciplines distinguished above should be followed. The hardest is that of assessing benefits. In approaching priorities, all the balances set out in section III above should be kept in mind, though in practice the real choices are usually between collecting "more or less" of a particular kind of data (in terms of accuracy, frequency etc.) rather than whether or not to collect it at all.

76. Ideally, all the projects and priorities should be incorporated in a statistical plan covering, say, from three to five years ahead and revised annually on a rolling basis. This is the basis of an over-all statistical budget, couched both in financial and manpower terms.

77. Perhaps the most important point to emerge from this discussion is the need for flexibility. There is such a multiplicity of users, and statistical programmes cover such a range of complexity, time-span and function, that the system as a whole must be capable of adapting itself readily to new needs while yet keeping its long-term data-improvement strategy intact. This calls for a first-rate infrastructure in terms of staff and computers; it calls for adequate contingency reserves of staff and money to cater for new needs; and it calls for a good basic survey system. The more the data are stored in micro sets, the more analytical flexibility there will be. Flexibility can also be helped by a straightforward administrative structure for determining priorities with appropriate committees and with the main decisions referred to a committee of senior officials and, where one exists, the national statistical council. Priority decisions should be centralized as far as possible; this is harder in a decentralized system where, inevitably, many priority choices will be made in individual ministries. The very concept of an over-all statistical plan is harder to achieve in a decentralized system; yet it is in a sense more important because there is a greater danger that departmental pressures will interfere with broad, non-departmental projects (e.g., the national accounts). A defence mechanism is needed.

78. It is clear from the above that the setting of priorities is a complex process involving many skills and approaches. The final decisions will always contain elements of arbitrariness and subjective judgement, but these can be exercised

against the background of various objective considerations. What is important is the output of the procedure. This should be a continuing series of proposals, arrived at by negotiation within the statistical system, and made the subject of negotiating between the statistical office and the Government's financial decision makers, and culminating as an agreed and integral part of the Government's over-all budget and priorities.
