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SYSTEM OF SOCIAL AND DEMOGRAPHIC STATISTICS (SSDS)

Potential uses and usefulness

Report of the Secretary-General

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INTRODUCTION

1.   The Expert Group on a System of Social and Demographic Statistics, at its second session, in April 1973, decided that a paper should be produced on the potential uses and usefulness of a System of Social and Demographic Statistics (SSDS) (ST/STAT.69, para. 62). This decision was a logical one. It had seemed to the Group that such substantial, indeed remarkable, progress in developing the structure, concepts and contents of SSDS had been made that the time was ripe for taking stock of how feasible it would be for countries to implement SSDS and, if feasible, how useful.[1]

2.   The present paper,[2] as originally conceived, was meant to concentrate on the second question, and to consider only incidentally ways and possibilities of implementing SSDS. With this in mind, questions about uses, actual and potential, were addressed to the directors of national statistical offices in a few countries, and this paper owes much to the helpful replies received from Austria, Canada, Denmark, France, Hungary, the Netherlands, Norway, Poland, Sweden and Yugoslavia.

3.   These replies confirm an impression that there may now be some uncertainty about what SSDS actually is: to what extent it is "new" and how it relates to other activities in social statistics; whether it is a system in the same sense that the national accounts are a system; where its essential core lies and indeed whether it has one; and whether it is basically a system of raw data, perhaps based on individual data files, or of finished tables.

4.   The present paper, in addition to its intended purpose of illustrating the usefulness of SSDS, attempts to clarify some of these issues. This seems essential if we are to achieve a clearer idea of what it means for a national statistical office to "adopt" SSDS. Rightly or wrongly, there is at present some scepticism about SSDS in national statistical offices, even though its technical achievement is universally admired. The reason for the scepticism lies partly in the fact that work on SSDS internationally has moved well ahead of national efforts, unlike earlier development work on the national accounts. Accordingly, national statisticians feel confronted with the challenge of implementing a system which not only seems of great complexity but which has not emerged from their own activities, as the national accounts did. This feeling perhaps reflects a misunderstanding of what SSDS, as so far developed, is meant to do, but even so it is real enough. The present paper seeks to remove some of the possible causes for scepticism.

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    [1] The Expert Group had reviewed a draft of document ST/STAT.68, "Towards a System of Social and Demographic Statistics" (Preliminary Version) prepared by Professor Richard Stone (United Kingdom). A revision of this document will be published in 1974.

    [2] Prepared by Sir Claus Moser (Director, Central Statistical Office, London) acting as consultant to the United Nations.

I. SOME BACKGROUND

5.   Activity on SSDS stems from a number of roots. In part, it owes its existence to the increased interest in social statistics of recent decades. For some time statisticians had put their most creative efforts into economic statistics, including the construction of the economic accounts, which are complex and sophisticated; this owed much to their own initiative but a great deal also to the increasing demands for better statistics from economic policy-makers, planners and others. Social statistics meanwhile remained patchy, and were strongest on basic items like population, housing, and so forth. Pressures from the policy side were slow in coming. All this has changed. There is now immense interest across the world in better social measurement, in assessing the fruits of economic growth, of measuring needs and the distribution of benefits, and everywhere social statistics have increased priority. Social scientists involved in studies of social change add to the pressure for better data. Consequently, census and survey programmes are being extended and, in some cases, systematized; compilations of related social data, as in the United Kingdom's Social Trends, are appearing in a number of countries; there is much activity on social indicators, and there are efforts in model building, and in SSDS.

6.   This last is not surprising. Statisticians will always, given the chance, seek to connect data, trying to bring order into complex phenomena, and it is altogether right that this should now be happening with social and demographic statistics. Just because this is (historically and perhaps intrinsically) a more patchy area than economic statistics, with national social policies being more segregated departmentally than economic policies, there is especially much to be said for attempting to connect different aspects of social conditions and social policies. This is especially important as interest centres on what is happening to specific population groups (e.g. the elderly, the handicapped). This gives impetus to looking at statistics in several dimensions, not only within single administrative categories, and encourages integration of data. And again, just because individual social statistics series have grown up in a more piecemeal manner than economic series - and unaided by the kind of theoretical basis that underpinned the national accounts - there is much to be said for systematizing the collection and the presentation of the statistics.

7.   Though not the only effort to this end, SSDS represents by far the most comprehensive, formalizing current needs and developments in social statistics. It has been through a number of versions, and these, and the stages of discussion leading to the latest version, are summarized in chapter 1, section B of the latest report, "Towards a System of Social and Demographic Statistics." (ST/STAT.68). A process which began with a "simple" set of input-output matrices concerned basically with population, education and manpower, has grown into something both wider and in a sense less totally integrated; it is no longer all in terms of accounts, and so the worry that all social data are not amenable to the accounting matrix treatment need no longer concern one.

8. Since "Towards an SSDS" has been widely circulated, no summary is required here. However, it is worth recalling how that paper summarizes the purpose of SSDS:

> "...to show what data are desirable on human beings, both individually and in groups, and on the institutions with which they are connected and how these data should be organised in order to provide an information system which will be useful for description, analysis and policy making in the different fields of social life. In saying this it must be recognised that different bodies of data are usually collected by different agencies at different times and using different methods." (Revision in preparation, para. 1.9).

9. One can argue about the precise boundaries of the SSDS framework and the Expert Group suggested some extensions and changes of emphasis. This will not be pursued here; the system as outlined is quite comprehensive enough for most practical purposes and for illustrating the issues of this paper. However, what does bear a reminder here is that SSDS encompasses several basic types of information:

(a) Stocks and flows of individuals and groups of individuals. This is the part which is organized in matrix form to enable "the state of an individual or group at a particular time (a stock concept) to be connected with changes of state (a flow concept)" (revision in preparation, para. 1.6). Both net flows and gross flows are covered. So are life sequences, possibly the most ambitious part of the system.

(b) Economic information. This relates to the provision of social services (which is organized as a straightforward extension of normal System of National Accounts (SNA) concepts) and to the distribution of their benefits throughout the community. It also encompasses the distribution of income, consumption and wealth.

(c) Information on time. This covers time accounts showing how the day, week or other period is used.

(d) Regional information. This covers regional breakdowns of national data, and more ambitiously, extends to full regional accounts or SSDS (not yet worked out).

10. These then are the basic dimensions of the system. Then there are subdivisions into components or subsystems like health, social mobility, labour and so forth. Another way of organizing the system would be by sub groups of the population, and this will be discussed further below. Most important, there are a variety of types of connexion linking different parts of the system, including common and characteristic classifications permitting various cross tabulations, sequential linkages of sub systems (where the output of one forms the input to another over time) and cross-sectional linkage of sub systems (where the output from one sub system is the same as the input to another on an accounting or identity basis).

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11. "Towards an SSDS" illustrates these and, in part three of the revision, will also give examples of the analytical uses of the system. Problems of data collection are also considered.

II. WHAT IS SSDS

12. One feature common to all meetings on SSDS is that sooner or later a more or less critical discussion develops as to what SSDS actually is. The nature of any system, as we are reminded in "Towards an SSDS," is that it should contain "an aggregation or assemblage of objects united by some form of regular interaction or interdependence... The essence of this definition lies in the idea of connectedness." (ST/STAT. 68, para. 1.4). So much is common ground. The doubts begin when one is confronted with a specific set of tables, however tentatively presented. Questions are raised on whether this is the most appropriate set for particular circumstances, whether it is sufficiently flexible to adapt to widely varying circumstances, how much of it is essential rather than just interesting. To set such doubts in focus, it is worth considering some different conceptions of what SSDS is, and, above all, to note that the label SSDS is applied to two conceptually different things, one being SSDS as specification, the other SSDS as implementation.

13. As to specification, SSDS, like any statistical system, consists of: (a) Inputs (basic data series), (b) Principles and techniques of methodology (linkages, aggregation, classifications, etc.), (c) Outputs (tabulations, indices, projections, etc.). "Toward an SSDS" intentionally concentrates on (a) and (b). Each sub-system contains what might be called a "minimum" list of basic data series (a) and the earlier parts of the document describe various linkage and other principles (b) which can be applied to (a) to produce various outputs (c). These outputs are not specified in the paper, though they are illustrated in part three, to be issued.

14. If we think of SSDS more in terms of implementation, there is no definitive answer to the question "What is SSDS?" One answer would be to say it is (c), i.e. an actual set of tables, but this is not very helpful. Those who discuss SSDS in these terms perhaps have at the back of their minds the system of national accounts, which is a complex structure of interconnected and balancing tables, carefully bound together with common classifications, concepts and definitions. The analogy is helpful to the extent that it emphasizes comprehensiveness, consistency and connectedness. But in a much more serious sense it is unhelpful, not to say misleading. The national accounts are unified by monetary measurement and describe a circular flow of transactions. They are based, at the core, on theoretical (postulated) economic relationships and – in a sense, the same point – they have a core – the estimation of production – on which the whole structure is pivoted. None of these concepts has an equivalent in SSDS. For these reasons, the comparison with the national accounts conjures up a more naturally and totally integrated system than SSDS can or probably ever will achieve. This is not to lessen the importance of linking SSDS and the national accounts, nor to discourage attempts to enlarge the national accounts so as

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to include parts of SSDS. But it is mistaken to think of SSDS as providing as totally integrated a picture of social conditions and structure as the national accounts do of the economy; and "Towards an SSDS" does not encourage this mistake.

15. It is also misleading, as has already been mentioned, to think of SSDS, as it now stands, as made up wholly of accounts. True, part of it (needed for life sequences) is envisaged in input-output matrices which are accounts in the conventional sense, and there are also the input analyses of the economic accounts. But much of the system as now set out is not -- and does not pretend to be -- accounts in the normal sense.

16. Hence, it is unwise to think of SSDS as a set of pre-planned tables or accounts, even though such tables can illustrate the products of SSDS. The number of potential tables is limitless, and one should get away from the conception of SSDS as a single package of tabulations to be implemented as such. This concept is forbidding, and implies a fixedness in the system which is not intended. The SSDS report contains some tables, but these are there for illustration and guidance on the kinds of analysis the SSDS can produce. Hence the title of the paper: "Towards a System ...."

17. At the other extreme, SSDS is sometimes spoken of as a way of organizing basic individualized data for individuals, households or other units. In this sense, the language is one of networks of data files, of their contents and of their computer storage and retrieval. Subject only to the range of data contained in the files, organized in terms of basic building blocks corresponding to the sub-systems, SSDS thus described is infinitely flexible in terms of outputs. But this way of looking at SSDS can also be forbidding in the challenges and public problems implied in individual data systems. It arises most naturally in its context of countries which have highly developed individual data and personal numbering systems, but not elsewhere.

18. However, SSDS as implementation is perhaps most helpfully defined as (i) Creation of appropriate basic data series (a); (ii) Developing SSDS principles (b). In this, (i) must clearly depend on each national situation, and SSDS can help in providing a check-list for statistical development. Whether, or rather to what extent, individual data files is used in building up (a) is a matter of national choice.

19. What is central to any conception of SSDS is its set of principles for structuring data (b), principles which can helpfully be looked at both in micro (individual data) and macro (tabulation) terms. This is essentially what "Towards an SSDS" does, but with an illustrative super-structure of tables. This is right in that, ultimately, one does after all want to produce tables; but the essence of SSDS does lie in its principles.

20. The key principles which make up SSDS are:

(a) That it should be comprehensive. This is not of course an absolute principle, nor one that is constant over time, but it is the essence of SSDS that

it should cover all the important aspects of social conditions and circumstances for the population as a whole and for sub-groups and areas.

(b) That is basic concern is with people. This again is not absolute, but it is essential to its nature that SSDS with all its analyses, even when they deal with institutions, should basically relate to individuals, families or households. This is a powerful integrating thread and must not be forgotten.

(c) That the circumstances of people should be described not only in terms of stocks, but also of gross and net flows, and life sequences.

(d) That it should be bound together by common, or at least consistent, classifications, definitions and concepts. This is, of course, vital to any statistical system and needs no elaboration here.

(e) That it should contain explicit linkages between and within parts of the system. These linkages can, as "Towards an SSDS" makes clear, be of several different kinds. Moreover, the different kinds of linkage play distinct roles in SSDS and require distinct types of data.

21. It is in the comprehensive application of (d) and (e) that the "newness" of SSDS lies. As to (a), social statisticians naturally try to produce comprehensive social measurements, whether they have heard of SSDS or not. As to (b), social statisticians again naturally concern themselves with people, and don't need SSDS to encourage them. As to (c), this again is not altogether new, though most statistical systems are much better set up to produce data on stocks than on flows. Life sequence data are very demanding in resource terms and may be somewhat of a luxury for most countries. Moreover, they are only entirely satisfactory where paths are simple with little "branching". But the need for a network of common or consistent classifications (d), and for a network of linkages (e), only arises in building up a system — and this applies as much in determining the organization of individual data files as in deciding on a set of tables. This then — the application over the whole range of social data of principles for structuring data — is what SSDS is. If one were being pedantic, one might prefer the first letter in SSDS to stand for systematization rather than system. Of course, to give practical meaning to it all, one has to come back to actual data and actual tables, but the "system-aspect" does lie in the application of these principles, rather than in particular data or tables. If this becomes a generally agreed usage, it is then natural for individual countries to select — according to their specific needs — how, and with what priorities, to apply the principles.

III. ILLUSTRATIONS OF USES

22. It is now desirable to consider what gains might come from pursuing SSDS in the sense suggested above. This will be looked at primarily from the national point of view, although international comparisons of data and the formulation of international programmes would obviously gain from national improvements. Moreover, the discussion relates mainly to developed countries; though once one thinks of SSDS as a set of principles rather than of specific tables or raw data, this limitation is less constricting.

23. Gains from SSDS can be gauged at various levels. One can consider "purely" statistical improvements whatever use may or may not subsequently flow for policy. Or one can look directly at potential gains in policy formation or monitoring, that might flow from a systematization of data, or the construction of analytical and forecasting models. All these will be reflected in the paragraphs to follow.

24. Unfortunately, it was not possible in the time available to examine the policy uses in any depth. This would have been a major task. It would have required, for a given subject policy field, a thorough examination of what kinds of policies are involved, nationally and at area level, how these policies are or could be helped by the various outputs from SSDS, and so forth. This has not been practicable. Instead, this section of the paper approaches the question of uses from a number of separate angles and standpoints. This is more superficial, but some conclusions do emerge.

A. Some country reactions

25. First, there are the replies received from countries in response to the letter asking for information on the national implications of the development of statistics along SSDS lines. The replies deal with two groups of subjects:

(a) General principles and concepts in SSDS which statistical offices think are applicable and useful in their countries. The two most frequently mentioned are standardization of classifications and definitions across sequences and sub-systems of social and demographic data, and the step-by-step extension of the basic demographic population model based on births and deaths to other life sequences or events, including aspects of education, employment and retirement; and

(b) Examples of work in progress or planned which accord with the general principles of SSDS. The most frequently mentioned are models linking learning and earning activities, and the supply and demand for labour, taking into account other factors such as inter-industry and regional mobility; and distributional aspects of public consumption and expenditure, and their relation to living conditions.

In addition, the replies describe various approaches to data-gathering and organization. These include a number of simulation, forecasting and input-output models as well as individualized data systems based on common

identification numbers, both in large, centralized files and in sub-system
files; multi-purpose surveys; special-purpose surveys oriented towards
particular client groups and particular social problems; and cohort studies.

26. On the general applicability of SSDS principles and concepts, a key element
discussed is the co-ordination of classifications and definitions as set out in
part Two, "Individual Sequences and Sub-Systems" of "Towards an SSDS."
Countries stressed that SSDS will provide considerable impetus to the
co-ordination and integration of social statistics. They feel this is a payoff
which will contribute considerably to the usefulness of all social and demo-
graphic data. As one respondent put it, citing the proliferation of special
surveys which have been difficult to co-ordinate, "A very serious weakness of
human and social statistics, such as it is presented today, relates to lack of
consistency between sub-systems. If such a consistency can be achieved by means
of SSDS, a very great improvement will, in my opinion, be made from the point
of view of both analysts and policy makers."

27. More specifically, some countries looked to this process of systematizing
as a way of developing well-rounded measures of living standards and living
conditions; some felt that the co-ordination of classifications and definitions
on public consumption would be a particular and long-overdue benefit.

28. An interesting reference was to the Nordic Working Party for an SSDS,
which is concentrating in 1974-75 on developing a standardized list of central
objects and variables of SSDS as part of first draft "kernel tables". Denmark
is also pursuing standardization in connexion with the development of its Mini-
Population Register (MPR), which is specially designed to monitor population
sequences, among other purposes.

29. Countries expressed interest in the elaboration of principles relating to
life sequences. Examples of new statistics and analyses for many kinds of life
cycle events related to population characteristics are, inter alia, births
related to age, parity, religion and labour force participation of mothers;
living conditions of women, with particular reference to learning and employment;
living conditions of older persons; social and demographic characteristics of
victims of accidents and criminal offences, and of the handicapped; and
statistics of internal migration. Whether all of these require full life
sequences (i.e. longitudinal) data as opposed to occasional flow figures is
clearly a matter of judgement.

30. In sum, the replies indicated considerable interest in the basic concepts
of SSDS, and showed that much developmental work is being undertaken which is
consistent with SSDS, even though SSDS may not be its principal inspiration.
The concepts of sequence and sub-system linkage, though not always explicitly
noted, were evident in the expressions of interest in consistent definitions
and classifications for several sub-systems, and in transition data within and
among sub-systems.

31. The extent to which there are statistical programmes consistent with SSDS varies a good deal. There are two approaches of particular importance to SSDS: extensive multi-purpose surveys, and intensive development of single sub-system linkages.

32. Major multi-purpose surveys were reported by several countries, but only one reported a comprehensive effort to standardize these data with other basic data sources. Other countries tend towards incremental standardization within one or two sequences or sub-systems. Nevertheless, these efforts seem to be absorbing considerable effort in the statistical offices, and there is no doubt about the importance of multi-purpose surveys as a central statistical tool in working towards SSDS.

33. In terms of analysing sub-system and sequence linkages, all countries reported work on the learning-employment sequence. 3/ Other sequences mentioned were population-employment, population-health, population-income, consumption and income, and income-property. No doubt this is only a small sample of such applications.

34. Within single sub-systems countries reported many model-building and forecasting exercises, though usually on a limited scale. One country claimed that, "Our /education/ 'matrix' is available and is thoroughly used in educational planning." Fertility models were mentioned by some countries. Developmental efforts included population, learning and labour force. Other sub-systems dealt with much less frequently were time and leisure, public order and health, and social services.

35. Most of the developmental work reported was intended to assist policy requirements, at least as interpreted by statistical offices. In some cases, policy examples referred to living conditions as a whole, or among the low-income population, the aged, special groups like women, immigrants, the disabled, disadvantaged children and so forth. Interest in policy problems at regional, provincial or other area level was as great as, if not greater than, at the national policy problems. Numerous examples of policy needs for SSDS were also given for specific fields — notably health and health care, employment and income, internal migration, social services, supply and demand for labour, public consumption, mobility, and housing.

3/ The Netherlands summarized this interest and its stage of development: "There is a frantic demand for information about: the flow from education into the labour market; flows between industries; the flows out of the labour market. We are working on that kind of information, but it will take many years to develop something useful."

B. Examples of applications in part Three of SSDS

36. So much for country comments. Next one may look at part Three of "Towards an SSDS," which shows an extensive range of applications. They are arranged according to the major sequences and sub-systems and are taken from the existing research and government literature. The selection is governed by two purposes:

(a) to show for each sub-system and sequence an example of social and demographic statistics organized along the lines proposed in the paper, based on matrices and transition data;

(b) to show with examples using existing data, for each sub-system and sequence, how the structuring and systematization of data along SSDS lines can be used in analyses with policy implications.

37. These aims are well achieved, especially the first. A rich variety of examples is given of models which require the kinds of stock and flow data charac- terizing part of SSDS. In this sense no doubt is left of the usefulness of SSDS as the base for analytical or descriptive models. Any activity requiring forecasts and projections, and any models intended to throw light on processes of social change, will benefit from data structured along SSDS lines. This applies to models concerned with individual sub-systems (e.g. education) as well as to models cutting across sub-systems. To what extent such models actually or potentially help policy is another matter, and one that is not probed there or here. It seems reasonable to assume that a better understanding of social processes, such as are provided by analytical models, can only help policy formation and monitoring and these examples show well how SSDS-type data can aid the construction of models. The following are some examples from part Three which, it seems fair to assume, could potentially be of policy value: population (and particularly fertility) models and forecasts; migration and employment; education matrices showing flows through the system; labour force matrices including occupational status; repetition and duration of employment on a life table basis; distribution and redistribution of income and public consumption expenditures and transfers; forecasting government liabilities under social security schemes; occupancy (of dwellings) and tenancy matrices; repetition by age and race of criminal offences by type of offence.

38. So the impression left from part Three is that there are already many examples of analytical and descriptive models of social processes, of the Markov- chain variety, which require the kinds of data set out for sub-systems in the earlier parts of SSDS. So far so good. What is hard to draw from part Three are any general conclusions about uses. The examples are of many different kinds, and so they do illustrate the many-sided usefulness of linked data. What is not explicitly brought out is what kinds of linkage underlie each example so that one could classify the examples by type (rather than by subject-matter). This addi- tional step is necessary if national statisticians are to gauge what kinds of applications will be made possible by what kinds of data structures and linkages. Most of the examples deal with models within sub-systems, and this is insufficient justification for attempting a comprehensive assault along SSDS lines. More examples are needed of the use of SSDS for linking, e.g. flow or stock data is one sub-system with flow or stock data in another. But perhaps one could not have expected such examples as yet.

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C. The "layers" of SSDS

39. The examples in part Three come largely from the more sophisticated end of
the SSDS developmental spectrum. Many of them are in matrix form and quite a few
deal with life sequences. What this does not convey is how useful, for ordinary
policy purposes, the more mundane outputs might be. If one is thinking of trav-
elling gradually along the SSDS road - which is, realistically, the only possible
way - one needs to see what would be gained from each individual step, from the
simplest stock data to full life sequences. This is best illustrated in relation
to a single field, and since the principles of SSDS were first worked out for the
learning sequence and sub-system, this is chosen here.

40. Basic learning sub-system. Statistics on learning are collected in most
countries on the basis of enrolments by level and usually by field and type of
programme. The proposed UNESCO International Standard Classification of Education
(ISCED) already provides a common international classification system for these
basic statistics. Such enrolment statistics by level, field and programme are
fundamental to administering any educational system. By themselves, however, they
cannot be consistently linked to two other important kinds of statistics, enrolment
and attainment characteristics of the entire population, at all ages. These links
are essential to comprehending the distribution of education and of educational
services in the population as a whole, even on a cross-sectional basis.

41. Population-learning flows. One obvious piece of information that should be
added to enrolment figures to begin to fulfil these additional requirements is
age, that is, to give enrolment by age and attainment by age. The first enables
the calculation of the distribution of current education services by level of
education and by age, and the calculation of the distribution of the accumulated
stock of years spent at school. If independent tests of degree of literacy or
proficiency of some kind are available, these can be used as a rough basis for
calculating performance measures for education services, relating years in school
to levels of literacy or other kinds of proficiency attained. Frequently, however,
the former is used as a proxy for the latter.

42. Learning sub-system flows. Thus far, the statistical base required is entirely
cross-sectional, years in school on an annual basis by age, level, fields and pro-
gramme, and years completed by age. These data are sufficient for estimating basic
education requirements and achievements in a society. The basic linkage which they
establish is between demographic structure and education outputs (years of attendance).
Two additional planning requirements come next, rates of completion and year-by-year
transition by level and age of students. In practice this requires that one identify
a universe of "enrolees" and "non-enrolees" by age, and that one record their present
enrolment status and their enrolment status one year previously. In the learning
sequence, it will not normally be necessary to extend the recording of sequence
transitions further than one year back since the person's current or last enrolment
level will give enough information on his total learning history, in terms of the
accumulation of years enrolled.

43. For educational planning these statistics will enable one to make more precise calculations of the use and distribution of educational services by age and of changes in them from year to year; they may also be used to check the consistency of enrolment statistics with, say, census results on years completed. Where drop out rates are high, this consistency check may be necessary to establish even minimally reliable and meaningful series. Given these series, the planners are in a much better position to anticipate the future demand for education, and to project the impact of given levels of output from the educational system on the educational stock of the population as a whole.

44. Once these basic statistics and indicators are available, further extensions of the system can be considered, such as: calculations of performance and efficiency using expenditure and manpower data; also calculations of 'output' measured by literacy rates and the like; linking the learning sequence to the earning sequence; assessing educational opportunities by further cross-classification with the income and mobility sub-systems.

45. The first is largely an analytical task which can be considered a useful application of SSDS. Some of the necessary calculations need comparable classifications between the relevant sectors of the national accounts and administrative data on educational institutions and manpower.

46. In the second case, the simplest extension to the earning sequence would need to cover only one year. That is, in addition to measuring the flows from one learning level to the next one, or to non-enrolled status and vice versa, non-enrolled status would be broken down by employed - unemployed. Transition ratios would be calculated for school leavers by final level and qualifications attained to employment status one year later. Employment status should also specify occupation and income. This is perhaps one of the most important sequence links in the SSDS, and the one in which national policy makers and planners are consistently most interested. Unfortunately, the simple one-year extension is probably inadequate for most purposes, important as it **is** for a start. In the learning sequence, year-to-year changes can illuminate much of the dynamics of the system, but in the transition from the learning to the earning sequence, it is more important to build up a cohort history over, say, five years from school leaving, or from the compulsory school attendance age limit. The early earning history is likely to be unstable, and persons may shift back and forth several times between employment, unemployment, part-time work, and further schooling. A full cohort analysis for this phase would enable one to calculate employment periods, unemployment periods (by number and duration), and learning spells related to level of schooling, qualifications obtained, and type of occupation and income. In this way a comprehensive picture of the learning-earning transition could be built up. After, say, the five year period following school leaving or compulsory attendance, cross-sectional data on final qualifications and years completed would be sufficient for most purposes for assessing the relation to occupation, income and employment status.

47. The learning sub-system itself could then be elaborated with additional common classifications for further analyses, as shown in part Three, e.g. to estimate public and private rates of return to schooling. Finally, if one wanted to make extensive calculations of differing educational opportunities, one would need to classify students (and non-students) by occupation and the income of their parents. This illustrates a link between the active and the passive sequences in the structure.

48. Schematically, the types of use of the various levels of SSDS can be set out as follows:

Data components	Applications
a. Basic learning sub-system	
1. Enrolments by level, field and programme	Education administration
b. Population - learning flows	Planning and forecasting education attainments in society for general setting of desirable objectives and allocations of required resources
2. Enrolments by age	
3. Attainments by age	
c. Learning sub-system flows	
4. Year-to-year transitions by level, field, programme, age	Planning year-to-year education demand by level, field and type of programme relative to population base
5. Completions, non-completions by level, field, programme, age	Evaluating success of education programmes
d. Performance calculations	
6. Learning manpower	Calculating institutional performance and efficiency, unit costs
7. Learning expenditures and institutions	
8. Testable achievement (e.g. literacy) by age, attainment, qualifications	Monitoring social performance in the distribution of knowledge and skills
e. Learning - earning transition flows	
9. Five-year cohort transitions: learning by level, age, qualifications to earning by occupation, income, unemployment spells and duration	Planning supply and demand of human resources; assessing successful functioning as citizens (see the OECD List of concerns)

f. Educational opportunity
calculations

10. Enrolments and attainments by family income, occupation, class and learning expenditures, institutions and manpower	Constructing social indicators of equity and inequality
11. Learning transitions and completions and learning-earning cohort transitions, by family income, occupation and class.	Calculating factors influencing equity, inequality and equal opportunity matching and adapting supply and demand of human resources utilizing human resources fully.

D. Use of SSDS for studying "client groups"

49. This illustration of the uses of different layers of SSDS, centred around but not confined to a specific sub-system, could be multiplied manyfold. But SSDS should also be looked at from another angle. How well could SSDS principles be applied if the focus of interest was not a sub-system (e.g. education) but a specific population group (e.g. disadvantaged children, the elderly, the poor)? This is obviously vital for many purposes. The social policy-maker is often concerned with the impact on a particular section of the population of a variety of policies, and it may be the inter-action of policies and programmes, and the way they supplement or duplicate each other, that interest him most. Thus a number of government departments may have policies to help the elderly, and the co-ordination of these policies will require integrated data about the costs of the services, about the composition of the recipient groups and the effects the policies have on them. It may indeed be the case that different policies are incompatible or conflicting or that there are gaps between them -- and a comprehensive statistical framework can point to this. Indeed a major purpose of the systematization implied in SSDS should be to lead to a clearer, more precise definition and measurement of social problems as they may relate to specific "client groups".

50. As an example, we can consider the position of "disadvantaged children" in a society. SSDS could bear on this problem in two major ways -- definition and measurement of the dimensions of the problem and diagnosis of the underlying influences and monitoring of relevant policies. SSDS would, of course, provide for uniform classification by age groups among all the sub-systems, so that the many factors affecting the situation of children could be considered within or among the sub-systems. A particular concentration on disadvantaged children would have to start with a working definition of disadvantage, rather than a general catalogue of the status of children along a number of dimensions. Disadvantage could be defined in all kinds of ways -- being sickly, suffering from parental neglect, and so forth. One possible definition might be children in families with inadequate incomes, given the size. Even at this basic level, an integrated set of social and demographic data is a prerequisite to an appraisal of the number of children in families falling below some standard of per capita income.

51.   Having identified this particular group in society, the prerequisite to
policy making is to identify its characteristics along a number of welfare
dimensions and to relate them to conditions and characteristics of the population
as a whole. These could encompass the main sub-systems of the SSDS: health
conditions and health care services, consumption standards, especially of food
and clothing, housing standards and certain environmental amenities such as
play space, size and other characteristics of the family, and adult employment
in the family, delinquency and its treatment, educational achievement and the
distribution of education services etc. A substantially integrated system of
statistics is the only way of ensuring that such varying aspects can be related,
and their interactions studied. Policy strategies might then encompass direct
intervention through improved public services and related distributional policies,
and various kinds of indirect intervention, which would need analyses of factors
influencing deprivation, such as parental separation, large families in need of
income or other assistance, problems relating to unemployed parents, slum
conditions, etc.

52.   In the design and analysis of both direct and indirect policies, it will be
necessary to establish measures of efficiency and efficacy. Again, a thorough
grounding in the relevant demographic data -- i.e. the distribution of
conditions causing disadvantage, however defined, by type of family and type of
child, would be essential to effective policy design. But these demographic
data must be integrated with data on services provided, assistance received, etc.,
and with the resources put into these services. And if one is to assess the
success of policy in enabling children to overcome their disadvantages, life
sequence data become important.

53.   Finally, statistical description and studies of client groups need a time
dimension. One needs to know to what extent the disadvantaging or other
conditions are permanent or temporary in order better to assess how policies
affect disadvantaged children over time. This time dimension is one to which the
organization of statistics along SSDS lines is intended to be responsive.
Ideally, it ought to enable one to see how a single source of disadvantage in one
period, as in health, may impose other sources of disadvantage in later periods.
Even within SSDS sub-systems it is clear that educational deficiencies can
cumulate over several years. Such an accumulation of disadvantaging factors
is often interpreted as a vicious circle which the policy maker feels ill-
equipped to cope with. What is required is a comprehensive analysis, over time,
of the sources and effects of disadvantage. Where, for example, youth
unemployment rates or secondary school drop-out rates are high, social policy
is likely to be ineffective if it is directed solely at the ultimate point at
which disadvantage becomes manifest, e.g. delinquency. It must follow the
accumulation of disadvantage back through the development of the child to a more
potentially lasting point of influence, and then sustain that intervention until
a more favourable outcome is reached. SSDS is particularly well suited to
monitoring and guiding such a comprehensive approach to the problems of
disadvantaged social groups, where the time dimension is so important.

54. This discussion of how SSDS can be used in relation to specific population groups is necessarily sketchy, but gives an idea of how useful SSDS could be in this respect. In "Towards an SSDS," the system is set out in terms of sequences and sub-systems rather than in terms of client groups, and the only reference to this problem appears in paragraph 21.7 of the new version of SSDS, where it is stated that it is possible to invert the roles of sub-systems and problem areas and that, this being so, part Three for reasons of convenience will follow the same order as part Two, that is, will provide examples relating to sub-systems rather than to problem areas.

55. It is not difficult to see why the report takes this approach. It is clear from many passages in the report that many aspects of the system can be implemented by means of comparatively minor extensions of existing methods of collecting statistics and do not involve scrapping all that has gone before and replacing it with something else. Statisticians are all familiar with collections of educational statistics, labour statistics, health statistics, criminal statistics etc. In many countries, each of these collections is under the control of a separate ministry or department. If one sees the first steps of development in terms of improving and relating existing collections, the method of presentation adopted by the report is clearly the most helpful.

56. Were one to start with client groups, the position would be different. Although the different client groups are likely, in varying degrees, to be identified in traditional statistical collections, it is not always easy to extract uniform tabulations for the different groups from these collections, though no doubt this could be done if suitable, conformable modifications were introduced. If one's point of departure were client groups, it would be natural to give more weight to microdata sets, and all kinds of surveys, including multi-purpose surveys and longitudinal studies, as the basic sources of data. Individualized data systems are also, of course, well designed for this purpose.

57. Thus if the roles of sub-systems and problem areas (or client groups) had been interchanged in the report, more emphasis would have had to be put on novel data sources and, especially, specially designed surveys. This might have given a misleading impression since, as is stated in the report, while new sources are needed for some problems, many of the aims of the system can be achieved by a modification of existing sources, and the system does not stand or fall on the issue of new sources against old. However, the use of SSDS for studying client groups is so important that this aspect now needs special attention.

E. Social indicators

58. Whether one is thinking in terms of subject fields or population groups, one type of output of SSDS is clearly the construction of social indicators. This is not the place for arguing about the definition or scope of social indicators, but there can be no disagreement that the presentation of social indicators can, in one sense or another, be helped by SSDS. Moreover, it is widely agreed that social indicators should be somehow related to social concerns, policies and programmes, so any assessment of the uses of SSDS should consider how readily it could produce social indicators.

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59. One can start with the OECD work on social indicators, which begins by identifying "the social demands, aspirations and problems which are or will be major concerns of socio-economic planning processes" which is then to serve as a basis for "measuring reporting change relative to these concerns". 4/ The first OECD report on social indicators is summarized in the report on social indicators before the Statistical Commission (E/CN.3/450). The OECD report identifies and reviews the major social concerns to be developed. OECD is now engaged in selecting and specifying suitable measures for these social concerns.

60. The List of Social Concerns Common to Most OECD Countries 5/ was clearly intended as a conceptual guide, not as a statistical one. The document states that neither the selection of social concerns nor the specification of desirable measures or indicators will at this stage be constrained by the likely availability of actual statistics; desirable statistical development is a question left open for later discussion. But it is useful to consider the extent to which SSDS might help to strengthen the statistical foundation for social indicators both within the United Nations and for the OECD.

61. In the first place, it is clear that the better the underlying statistical foundation (that is, the greater the sequential and classificatory integration achieved through SSDS), the better, more comprehensive, more consistent and more comparable will be the social indicators, whether they are used for policy making, social analysis, setting of goals, general understanding or anything else.

62. The OECD List is compared in detail with the social concerns in the SSDS in the document on social indicators (E/CN.3/450). On the whole, it is clear that SSDS could serve as a principal data base for many of the concerns. In health, for example, social indicators for the OECD concerns, "The probability of a healthy life through all stages of the life cycle" and "the impact of health impairments on individuals," 6/ could easily be based on data called for in the health sub-system of SSDS. This sub-system is described as follows: "This part of the system is mainly concerned with states of health, the ways in which they can change, the treatment of adverse states, the costs and consequences of such treatments and the facilities available for them." (ST/STAT.68, para. 19.1). In addition, the "Sub-concerns" of the second OECD health concern reflect more specific aspects of health and health care services for which it would be particularly desirable to have extensive statistics such as the SSDS would provide as a data base for the indicators. Two of the central aspects of SSDS, the detailed analysis of the distribution and impact of public expenditure consumption and transfers, and the sequential accumulation of data, would be particularly productive to the development of good indicators for these *concerns ; the first is explicitly based on*

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4/ List of Social Concerns Common to Most OECD Countries, Organisation for Economic Co-operation and Development, Paris, 1973, preface, para. 2.

5/ Ibid.

6/ Ibid., para. 18, A-1 and A-2.

the life cycle concept, whilst the second is explicitly directed to the relation between health and impact and equity in the distribution of health care and services.

63. A third concept central to SSDS is the linkage of sub-systems. While such links may be difficult to work out in practice, they are high among country priorities, judging from the countries' replies to the request for comments. They are also an integral part of the OECD work on social indicators: General overview rather than sector appraisal: The primary focus of the list of social concerns is the provision of an overview, an overall perspective of social well being or the lack of it. 7/ The concerns chosen illustrate this overlap and linkage. Two of the concerns relating to individual development through learning for example, stress learning in a larger social and economic context, with reference to successful functioning as citizens in....society, 8/ and fulfilment of economic potential. The relevant social indicators would clearly be improved by the development of linked or cohort data as described in SSDS.

64. The OECD List specifies that its social concerns are intended to reflect definable aspects of well-being, not matters of instrumental or indirect importance to well being. 9/ Thus, the social concerns do not necessarily reflect standard sectoral divisions as found, for example, among government ministries. A single social concern may reflect conditions of welfare covering several different sectors, and its measurement may require statistics to be combined in some way from these various sectors. Many such examples are noted in the List.

65. In table Two of the paper on social indicators (E/CN.3/450), these links are translated into practical terms by specifying for each sub-system and sequence common classifications of the system and characteristic classifications of other sub-systems. Thus both learning and earning sequences and sub-systems specify common classifications in terms of sex and age, urban-rural, national or ethnic origin, and socio-economic class. In addition, the earning sub-system specifies level of education successfully completed as a classification for the unemployment indicators. In the sub-system for the allocation of time and leisure, the characteristic classifications of sub-system specified are uses of time and uses of leisure time, which are consistent with the measurement objectives of the OECD concern and sub-concerns in this area.

66. In the notes to the OECD List, reference is made to a number of linkages implicit in the concerns. These may be compared with those specified in table Two of E/CN.3/450, to gain some idea of the utility of SSDS in exploring key interrelations.

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7/ Ibid., para. 6.

8/ Ibid., para. 18, B-1.

9/ Ibid., para. 1, foot-note 1.

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(a)   The OECD List notes that health is influenced by pollution, working
conditions, leisure opportunities, and violence and victimization. In table Two
of E/CN.3/450, socio-economic class and urban-rural are specified as common
classifications in looking at length of life and disability. In the earning
sub-system under working conditions, specified classifications are rates of
disability, injury and occupational disease by socio-economic class, kind of
economic activity, occupation and the appropriate medical classification. In
table Two, the classification of injuries is also noted as an applicable class-
ification under frequency and severity of offences and victimization.

(b) In the OECD List, learning is considered a basic input into the avail-
ability of gainful employment for those who desire it, 10/ and into income,
corresponding to the SSDS treatment of the sequential links from learning to
earning and the distribution of income.

(c) Availability of gainful employment is considered closely linked to
the income concerns and to skill qualifications, in table Two employment
compensation is cross-classified with occupation and fractile groups of wages
and salaries.

(d) Quality and quantity of income and consumption are intended to
encompass public consumption goods, such as education, health, housing and
environmental services, consistent with the comprehensive treatment of income
and public expenditure envisaged in SSDS.

(e) Social inequality is to be considered in relation to learning
opportunities, as it is in the SSDS sub-system on social stratification and
mobility.

Many of the relationships are thus paralleled in the structure of "Towards an
SSDS."

27. Given the central place in SSDS of the principle of sequential or transition
statistics to measure flows and the relation between stocks and flows, it is
useful to note those concerns in the OECD List which would require such data for
the development of relevant indicators. For example:

(a) The first health concern specifically refers to the life cycle concept,
and a sub-concern of the second (participation in society of the chronically
impaired and permanently handicapped) would require basic data on a cohort of
the impaired and handicapped for developing effective indicators.

(b) The two concerns relating to individual development already referred to
would require considerable cohort data for their effective measurement.

(c) The sub-concerns "employment security" and "career prospects" should
use cohort data in order to reflect actual experience and not just expectations.

10/ Ibid., para. 10, C.1.

(d) Protection of individuals and families against economic hazards should also be based on cohort data in order to reflect actual experience and effects as well as personal and administrative expectations.

(e) Cohort data are important to social concerns in the area of personal safety and the administration of justice, because of the high incidence of recidivism, and multiple episodes of victimization suffered by individuals.

(f) The sub-concern "extent of opportunity for social mobility" requires cohort statistics to devise indicators.

66. The main relevant points of difference between the United Nations and the OECD work on social indicators may be summarized as:

(a) Differences in scope: the OECD concerns cover a number of environmental aspects of well-being, but not - at this stage - population and the family, which are included in SSDS.

(b) Qualitative versus quantitative emphasis: The OECD programme specifies that its social concerns should in principle be quantifiable, but does not at this stage specify any particular source of statistics, whilst the United Nations Statistical Office takes SSDS as a basic statistical foundation for its social indicators.

(c) In general, social indicators in SSDS are intended to monitor aspects of welfare, that is, indicators are considered as tools in the planning processes, while OECD has emphasized only the importance of measures of results in terms of well-being, without regard to inputs and resources, their transformation into social services, and their distribution and use. In short, the OECD List is basically one of output measures, whereas, the United Nations list also includes inputs of various kinds, as a basis for constructing indicators of performance and efficiency.

69. From the above, it will be evident that SSDS can help in numerous ways in underpinning social indicators. This is true for the OECD list of social concerns, and, almost by definition, for the United Nations programme. The proposed United Nations indicators are conceived as summary measures or monitors of welfare and of the distribution, productivity and efficiency of public consumption expenditures. They provide a fusion of a systematization of social and demographic statistics, i.e. SSDS, and the production of policy, programme or problem-oriented social indicators. But the United Nations list necessarily remains an ambitious one and, for practical implementation, countries will need to establish priority lists tailored to their individual needs. This is where both the OECD approach, starting from policy concerns, and the United Nations approach, starting from the statistical framework, are needed.

F. Concluding remarks

70. This discussion could not, for the reasons given above, examine the useful-
ness of SSDS in any depth. But it has presented enough circumstantial evidence
to leave little doubt that systematization of statistics in the way envisaged in
SSDS would bring many benefits.

71. The countries' replies show that those countries - admittedly a selection
based on some evidence of interest in SSDS - are enthusiastic and confident
about usefulness. The examples given by them, together with those in part Three
of SSDS, show the wide range of applications. Most of them, it is true, are
examples of within sub-system applications, but this is not perhaps surprising
in the present stage of development. Yet it is disappointing how few illustra-
tions emerge of linkages between social policy areas, which is where SSDS has
potentially most to contribute. Most of the examples that do span sub-sectors
come from the population/education/manpower fields.

72. Examples demanding full life sequence data (as opposed to gross or net
flow data for limited periods) remain rare, and it is perhaps this part of the
SSDS structure which so far is least appealing in the national statistical
context. Not that the potential importance of full longitudinal data is
doubted by anyone, but there is so much to be done in cross-sectional linkages,
which could be achieved without too much delay and thus be helpful to policy in
the short term, that full cohort studies tend to be given lower priority.
SSDS, in terms of immediate policy appeal, is much more likely to flourish in
showing the connexions - not necessarily for single cohorts - between policy
areas, providing a basis for analysing the effects of different policies,
different strategies and different allocations of resources on particular
population groups.

73. This is why the "client group" example above is especially important, and
needs developing in further work on SSDS. Then, also it is crucial to divide
SSDS into "layers," as was done in relation to education above, so as to be
clear what the additional stages of SSDS contribute to usefulness - and what
they cost.

74. The usefulness of SSDS for social indicators has been clearly shown.

75. In trying to show the usefulness of SSDS for policy one should not demand
too much. A well-developed SSDS can indeed help to solve problems, to lay the
foundation for policy, to provide the basis for analytical and forecasting
models and to monitor problems. But it can above all provide a more integrated
and connected description of social conditions, and so throw up the dimensions
of problems from which policies can develop.

76. Apart from this, it is necessary to stress the direct statistical gains
accruing from SSDS. It is one of the vital spin-offs from any systematization
that it encourages, indeed requires, greater harmonization of statistics. The
national accounts are a striking example, and SSDS will be likewise. Class-

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ifications required commonly for different parts of social data will be
harmonized; differences between concepts and definitions will be ironed out; and
the comparability and integration - marks of a higher level of the statistical
art - will be improved.

77. Moreover, an SSDS framework is a valuable foundation for data strategy.
The planning of censuses and surveys, and the development of administrative data,
will be helped by having a comprehensive framework (whether in terms of basic data
or of tables), so that gaps, duplications and the like become visible.

78. Such direct statistical gains are important quite apart from the fact that,
as the basic statistical system improves through SSDS, so will its policy
usefulness. One should not forget that in the early days of the national
accounts - and later again with input-output analyses - there were many doubts
about usefulness, and SSDS is now at a comparable stage.

IV. CONCLUSIONS AND NEXT STEPS

79. SSDS, as interpreted in this paper, is not a pre-planned set of tables, nor
a pre-planned set of individual data files. It is a set of principles relating
to comprehensiveness, harmonization, connectedness and general structure to be
applied in developing social and demographic statistics. Thus, it is better
described as a systematization than as a system. However, this point of termi-
nology is not important. If people wish to use different interpretations of
SSDS, no harm is done as long as they specify their usage and do not insist that
it is exclusively the right one. And in any case, one cannot live on
principles alone. Progress depends on their application, and the SSDS
principles have ultimately to be judged in terms of how well they produce better
data and better tables.

80. SSDS, as looked at in this paper, defines a direction of effort, not a
single entity. One should not, therefore, think of implementing or not
implementing "it" as a single package; rather one should think of systematically
applying a set of principles to a comprehensive range of data, and of
providing a checklist for considering statistical developments.

81. SSDS is not, therefore, an alternative to other strategies in the develop-
ment of social statistics - except in the sense of a choice between a general,
systematic as opposed to an ad hoc way of proceeding. Many of the activities
of statistical offices - in the collection, storage and usage of data - conform
to the spirit of SSDS, though this is not why they are carried out. But one can
envisage a situation where an SSDS-type of framework (whether defined in terms
of basic data or tables) is used as a yardstick for measuring data strategies.

82. However, to say that SSDS is not an alternative to other strategies is not
helpful. It is one of the problems of SSDS that discussions internationally
treat it -perhaps inevitably-as virtually "priority-free". Inevitably because

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there are few, perhaps no, general priorities, and even within a particular
country it is hard to know where to begin. The only statement that can be made
with sureness is that, for the time being, international activities on SSDS
should avoid the impression of there being a generally applicable set of
priorities.

83. It should be added, parenthetically, that each country will need to decide
which modules or angles of SSDS to concentrate on first. In this, national
priorities on social concerns and social indicators are particularly important
as starting points. This has implications for further work on SSDS for
developing countries as well, which may include a selection and perhaps
redefinition of proposed social indicators work on classifications and concepts
related to the needs of developing countries; and above all, consideration of
the structure of SSDS in the context of data problems of developing countries.

84. The strategy that might now be followed on SSDS, internationally, is for
the Statistical Commission to consider, but it should concentrate on those
aspects likely to be most helpful to countries. The following suggestions are
made with this in mind. They cover a number of specific methodological steps,
as well as an area of concentration within overall systematization. And they
assume that work will be done at many levels and by various kinds of bodies.

85. One area of concentration useful to many countries is what might broadly
be called the social welfare accounts. In SSDS terminology, this comes under
the heading of economic information, but it goes much further than this implies.
The social services would be defined starting from the national accounts and
analysed in terms of input (overall resources) and outputs (services provided
for defined client groups). The essence would be analysis of eligibility for
particular services, and actual take-up of their services. Distribution of
benefits would be at the centre. Analyses would be half within sub-systems
(e.g. health) and half in terms of client groups (e.g. the poor). Analyses would
be at national as well as at area level. Data about individuals and households
would be in terms of stocks and flows, but longitudinal data would for the
moment perhaps have a low priority, until the basic data are better. So would
use of the time dimension.

86. This area of concentration would make sense in terms of policy needs for
a number of countries which are seeking better information on the relation between
resources put into social services and their benefits and beneficiaries, and
especially on the interaction of different services on the same group of
people. Moreover, statistically it would make sense to start SSDS where its
links with other statistical systems, notably the national accounts, are firmest.
It also relates well to current interest in the welfare dimension of the national
accounts, and also to work on income distribution. Work on these lines is
already under way at the United Nations and should now be given special impetus.
This work would also give the opportunity of showing clearly what the different
kinds of linkage - the essence of SSDS - contribute, how they fit together and
what their data demands are. Thus, a clearer picture might emerge (on the lines

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of the education example above)showing how useful stock data, gross flow data, net flow data and life sequence data, amongst others, are for policy.

Attention might also be given to the problems of developing SSDS with a regional and small area dimension, which is clearly of interest to many countries.

87. One can identify a number of methodological tasks needed in the systematization of social and demographic statistics, and these seem more important at this stage than enlargement of the scope of SSDS. It is open for discussion whether these tasks should be tackled over the whole range of SSDS or only in the narrower confines of the social welfare accounts proposed above; the latter is perhaps more practicable. Here are a few suggestions:

(a) SSDS depends critically on common classifications (age, social class, etc). There should, therefore, be agreement on what the key classifications are, and on their detail, matters which are by no means straightforward. The same process should be pursued on sectional classifications, and on definitions and concepts generally. Some work has been done and other work on this is under way. It is for discussion what additional work is required.

(b) Ways of collecting the various kinds of data envisaged for SSDS are discussed in "Towards an SSDS", but from the point of view of implementation another step is now needed. Given a hierarchy of connexions within and between sub-systems, how can different kinds of data achieve these connexions in each specific field? The range of choice includes various kinds of censuses and surveys (single or multi-purpose; cross-sectional and cohort; occasional or regular annual continuous surveys; etc); various systems of individualized data; administrative sources; micro-data sets. In fact, all these will provide inputs in the application of SSDS. What needs to be done is to assess their respective merits - and especially those of multi-purpose surveys and of individualized data systems - for different kinds of linkages, and their costs, and to consider the implications for computer storage and retrieval. The role of the international organizations in this task - which must essentially be done nationally - might be to organize some meetings or consulting work on, e.g. multi-purpose surveys, identification number systems, micro data sets and the like.

(c) Social indicators are a clearly envisaged aspect of SSDS development, and an obvious task now is to seek agreement on useful indicators along the lines of the United Nations and OECD lists.

(d) SSDS, as is clear in part Three, is particularly useful for analytical models. What would be helpful here is to have a systematic look at social policy models being used, planned or thought about in governments. This would be of interest in itself, and also in the SSDS context. It might perhaps best be done by outside research workers.

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88. The development of international work on SSDS might now concentrate on these various tasks, possibly selecting social welfare accounts as a priority area. This would mean attention to defining the inputs and outputs of the social services and finding ways of linking them. The various methodological tasks e.g. on classifications, on linkages, and on the merits and costs of different ways of collecting data - could be tackled within this context. Since even the social welfare accounts are an extremely broad field, implementation would need a "layered" approach as sketched in paras. 39-48 above in this way, the uses and costs of each step would be highlighted. But concentrating on the social welfare accounts as the core for developing SSDS principles should appeal alike to the users and producers of statistics.